THOMAS GALE

CHIRURGERI

GALEN'S WORKS

TRANSLATED

BY

THOMAS GALE.

A. D. 1586

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Very rare

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CERTAINE VVorkes of Chirurgerie, nevvlie

COMPILED AND PVBlished by THOMAS GALE, Maister in Chirurgerie.

LONDON

Printed by Thomas East, dwelling betweene Paules Wharfe and Bainards Castle. 1586.

The Contents.

1 An Institution of Chirurgerie. lib.i.

2 An Enchiridion, containing the cure of wounds, fractures, & dislocations. li.iiii.

3 An excellent treatise of the wound made with Gunshot, in which is confuted the grose opinion of Iohn Vigo, Brunswicke, Alfonsus Ferrius, and others. lib.i.

4 An Antidotarie containing the principall and secret medicines vsed in the arte of Chirurgerie. lib.i.

Note that in the end of the Antidotarie are placed all the Tables belonging to the Institution of a Chirurgion.

TO THE RIGHT HONORABLE THE

Lord Robert Dudley, Maister of the Queenes Maiesties horse, Knight of the noble order, one of the most honorable priuie Counsell, and his singular good Lord and Maister, &c.

If that be true (right Honorable) which not onelie Aristippus the Philosopher, but all other do confesse, y those things are to be taught, practised, and maintained, which in a common weale are most profitable and necessarie. Then I may boldly without iust cause of reprehension affirme, y Phisick is not the least, but one of y principall to be taught, practised, & had in honour and price. And because I will not further wade than my profession extendeth, I shall onelie touch the third part Therapeutike, called with vs Chirurgerie. This part, whether for the antiquitie, as the most auncient part of Phisicke, or for the necessitie and vtilitie of it, I should most commend, I cannot easilie iudge. But if we shall beleeue Cornelius Celsus, or the olde writers, we must of force confesse it to be more auncient than the other two. For before the time of the Troian wars, Chiron Centaurus and Telyphus, were of great renowme and fame, because they had first found the art to cure certaine virulent & maligne vlcers, (which afterward according to the names of Chiron and Telyphus) were called Chironia & Telyphea vlcera. In the time of the Troians mortall warre, Podalirius and Machaon being vnder Agamemnon, did meruailoussie profit the souldiers in curing their wounds, taking out of darts and things in them fixed, and applying healthful plaisters and medicines to the wounded parts. What necessitie is of Chirurgerie, or how much commoditie and profit by it ensueth, let the anſwere which are by the benefit of this art deliuered from paine, preserued frō losse & mutilation of mēbers, & defended from death it selfe. But here I hold backe my pen in further commending Chirurgerie, least it might iustly be anſwered by your Lordship to me, as was to the Sophist, who reciting a whole booke written in praise and honour of Hercules, said, Who despiseth Hercules? So in like sort your Honor might anſwere, who despiseth Chirurgery?

In déed (my good Lord) none despiseth it which are reasonable, & fewer enimies it should haue, if the professors thẽselues (in this our miserable time) were lesse grædie of money, & more diligent to learne their art. And although the malice of other make me hære to holde my peace, yet if I may craue your L. suppoȝation in so vertuous an enterpȝise, I shall not cease to set out some of the parts of Chirurgerie, ỳ therby the young and studious Surgions may be made the abler both to know & also to exercise their art. And therefore I haue made a booke, entituled: The Institution of a Chirurgion, then I shew thẽ a methodicall practise to cure woũds, fractures, & dislocations, in my booke called an Enchiridion of Chirurgerie. And for ỳ I heare ỳ many Surgions want knowledge of curing wounds made with gunshot (being now at Newhauen, vnder the right honourable L. Ambrose Earle of Warwicke, your honours most dære brother) I for their aide haue also compiled a treatise, containing the perfect cure of Gunshot. In which also I confute the errors of diuerse touching this question: whether the wound made wᵗ gunshot is venimous: last of all, because the young men for want of time haue not iudgement sufficient, either to chose out the best and most conuenient medicines, or else to compound new: I haue made mine Antidotarie, containing the principal & secret medicines vsed in Chirurgerie. In which I do not only set out such as the best writers maketh mention of, & I by long experience haue found profitable, but also I do open diuerse new, & to other yet vnknowen, of my selfe inuented. Beseæching most humblie your L. to take these bookes (the first fruits of my labours) into your noble protection, and defend both them, & me the author, from the malice of bustie detractors, & I shall not onelie hast other bookes which I haue by me vnfinished, but also as my dutie requireth, praie vnto the almightie for your Lordships long life, perfect health, & dailie increase in honour. At my poore house in London the 16. of Julie. 1563.

Your Honors most humble and obedient seruant,

Thomas Gale Chirurgion.

W. CVNINGHAM DOCTOR IN PHI-sicke, vnto his approued friend Thomas Gale, Maister in Chirurgerie, salutations.

WHy cease you M. Gale? What keepeth back the publishing of your foure bookes, which with so great trauaile & perfect skil you haue so happily finished? Doth feare of Sicophants and detracting tongues astoine you? Or the mistrust of seuere iudgement at the learned, keep back your honest attẽpt? Let these be no impediments I shal desire you, but banish feare, & put frõ you mistrust. And as touching the maleuolẽt detractors, it either needeth not, or helpeth not to stand of thẽ in dread. Apes will euer haue apish properties, with mocking, mowing, & grinning at euerie person do what you can. I my selfe haue somwhat tasted of their curtesie, and therefore can better vtter their nature vnto you. They be such as for the more part are ignorant thẽselues, or if they beare the face of learning, yet be they arrogant & loiter in idlenesse, and therfore to maintaine their name, do carp & reprehend other mens good labors, thinking therby among the rude multitude to get thẽ more fame & honor. These haue not so much hindred me with their serpentine tongues, as made mee among the wise and learned of greater estimation. For although it be a cõmon saying, yet is it most true [Viresci vulnere virtus.] But wil you eschew their sting & poison? Be idle thẽ, loiter, regard neither your dutie to God, nor yet to your Countrie. This must of force be your shift, which how honest it is, bee you the iudge your selfe. But you will saie peraduenture, you are armed against this sorte sufficientlie, not regarding their force, and yet you dreade the censure and iudgement of the graue & learned. Surelie these you need least of all other to feare: For like as Apes can do no thing but apishlie, so will the learned do nothing but learnedly, discreetlie, & with great aduisement. They consider by their owne trauailes, that it is no trifling, but great paines to write in anie arte or sciẽce. And when they reade other mens labours, and finde perhaps some errors, they reiect not the worke, they deface not the author, but thinke with themselues, Hominis est errare, And if the

errors be ſuch,as are thought not tollerable, they will not curiſhlie checke,but curteouſlie admoniſh,or elſe with their pen ſpeedely amend it. Seeing therfore that chattering Iaies may not preuaile againſt you,and that I haue(as I ſuppoſe)deliuered you of the miſtruſt you had in the learned, defer no longer time, nor make no more delaies, but ſince your Countrie craue it,your approued friends earneſtlie looke for it,and your dutie to both theſe require it,keepe theſe bookes no longer in darkneſſe,but let them taſt of light. And as touching your requeſt in your letters ſent to me,to peruſe & read your copies,to alter,change,and adde,as I ſhuld thinke good,I haue ſomwhat ſatisfied your expectatiō herein. And firſt I ſee your great diligence in reading your authors in Chirurgerie,as Brunus, Theodoricus,Rolandus,Lanfrancus,Rogerus,Bartalpalia, Guido de Cauliaco,Wilhelmus,Ier.Brūſwick, Vigo,& other. And do alſo conſider what great paine & difficultie it was, to collect ſo perfect workes out of ſo imperfect authours, I ſpeake it not to their diſpraiſe,they were in the time of ignorance. But in my ſimple iudgement,if the following of Galē, Auicen,Meſue,& others, of whom in your bookes you make ſo often mention,had not ſtaied you,& your long experience conducted,you ſhuld of force haue fallen into the huge pit of cloudie and moſt groſe errors. Among which,theſe following are not the greateſt, but yet not ſufferable in anie caſe. For what man is ſo mad,knowiug the nerues to be the cauſe of feeling,will in wounds of the nerues bid ſtitch the ſame? Who is ſo bold in great wounds in which there is fixed ſplents, ſhot, arrow heads,and ſuch like,to giue the patient ſleepe drinks as they call thē? Who is ſo rude in wounds with Gunſhot made through a member, as to drawe an hearing rope through the wound? Or what ignorance appeareth in thē all, in confounding the names of diſeaſes,and miſcalling of ſimples? Dooth not Guido the beſt of theſe authors rehearſed, call Oedema, Vndimia? Eriſipelas,Hiriſipela?Scirrhus,Sliros? & that which I moſt meruaile at,that he calleth Eſtiomenon (which is herpes exedens)mortem et diſsipationem membri,and he interpreteth Eſtiomenon,quaſi hominis hoſtem. How farre from the matter it is, and how ridiculous an interpretation, let the lear-

learned iudge. I loath to write them, and repent the loſt time in reading them. But theſe for a taſt I offer, whereby gentle reader, thou maiſt the better iudge and eſteeme the labours of the author our countrie man, who for his Countries ſake haue ſpared no time to trauaile, nor regarded his great expēce. Yea, and that which is more, not his feebled olde corps which is verie vnapt to take ſo great a thing in hand. This for my part I dare boldly affirme, that neuer in Engliſh was ſo perfect works in Chirurgerie ſet out, and I doubt whether in any other tōgue there be in all points anie worke extant in Chirurgerie, which with theſe may be compared. For if we ſhal looke firſt of his Inſtitution in Chirurgerie, how pithily, plainly, & compendiouſly, doth he ſet out the whole bodie of the art, ſhewing the definitions, diuiſions, & alſo apt names of tumors againſt nature, wounds, vlcers, fractures, diſlocations, & other like? How diligētlie inſtructeth he the ſtudent in Chirurgerie, firſt in the theorike and then in the practike part? Then the ſtudent being thus trained vp & now made apt to practiſe, he ſendeth him to his Enchiridion, in which is ſet out the method of curing wounds both in the ſimiler and inſtrumentall parts, and alſo ſuch apt medicines as are for them conuenient. He doth moreouer ſhew the cure of ſuch accidents as do often chance to wounds. Laſt, he doth open the curing of fractures and diſlocations. Furthermore, hee hath finiſhed a treatiſe, of curing wounds made with gunſhot, in which learnedlie he doth confute the long receiued errour that hath beene maintained for truth, how that ſuch wounds ſhould be venimous. How pleaſant this argument is, & alſo profitable, I refer it to thy iudgement (gentle reader) miſtruſting nothing, but when you ſhall weigh his arguments, with theirs of the contrarie part, you wil be wholie of mine opinion. And yet this good Gale ſtaieth not heere, nor is fatigate and wearied with theſe great pains, but hath alſo finiſhed a golden worke which hee calleth his Antidotarie, in which is comprehended the treaſures of Chirurgerie. There ſhall the Chirurgion hauing neede of medicines which doo repell, attract, reſolue, mollifie, ſuppurate, mundifie, incarnaie, conglutinate, cicatriſe, (and what is elſe requiſite to bee vſed in the Arte,)

finde abundance, as well of thoſe which are called ſimple, as alſo of them, which becauſe they ſtand in the mixture of diuerſe ſimples, are named compund. There ſhall he alſo with ſmal paine and great gaine receiue in one houre, that which in xl. yeres trauaile, with no ſmall expence, this Gale hath inuented and found out. Theſe bookes are now perfectly finiſhed. He hath moreouer in his hãds diuerſe other works (as I heare) vnfiniſhed, as a booke entituled, a Compendious Method of healing tumors againſt nature, another of the true and perfect cure of all kinde of vlcers. Alſo a new tranſlation of Guido de Cauliaco, with certaine briefe cõmentaries vpon the ſame. Beſides theſe ther be other whoſe titles I do not know. Therfore that theſe may alſo come to thy vſe, I ſhall require thee to ſhew a gratefull heart, & thankfully receiue that which he hath with paine finiſhed, & is freely without reward offered. But being delighted with the arguments of theſe bookes, I am digreſſed frõ anſwering the other part of your letter M. Gale. You required me that ſince I was ſo earneſt with you for the publiſhing of your bookes, that I would write ſomewhat in the praiſe and commendation of Chirurgerie. Which thing in mine opinion were ſuperfluous, when that there can be no greater praiſe than is written in your workes, conſidering that through the benefit of this arte the wounded is made whole, the broken bones vnited, the ioynts being out of their naturall ſeate, reduced into their proper places, the hough & painfull tumors expelled, and the virulent & maligne vlcers (which doth eate and deuour the mẽbers of man no leſſe than moths doth clothes, and fire that is put to it) are vanquiſhed & ouercome. Be not theſe great benefits, & ſuch as needeth not the commendation of other? But yet if theſe will not ſatisfie you, at the next ſetting out of other of your labours, if this my weak bodie may recouer ſtrength, I wil to my power ſatisfie your expectation. In the meane time I bid you wel to fare, & remẽber your white haires are menſſengers to admoniſh you that you muſt leaue this world, and repaire to the heauenlie Chirurgion Chriſt. And therefore haſt you for the time that remaineth, & finiſh thoſe works which you haue in your hãds. Againe farewell, & loue you Cuningham as you haue begun.

THO. GALE CHIRVRGION, VNTO the friendlie Readers, Salutations in Christ, &c.

IT was not without great skill & knowledge, ỳ the wise & learned Grecians did cal man by the name of Microcosmos, which is as much to saie with vs, as the lesser world, for the greater world (in Greeke Cosmos) doth consist of the heauenlie and elementarie region, and the lesser world (being man) doth vnder God rule and gouerne whatsoeuer is in them conteined, and applieth them to his vse and profit. And if we shal begin first with that most meruailous hand worke of God, I meane the beautifull heauens, so wonderfullie adorned & decked with most comfortable lights, what else shal we iudge but that he ruleth them, when being placed so farre from thẽ distant, doth diligentlie & trulie note & obserue, not onelie their motions, ascentions, descentions, progressions, retrogradions, stations, deuiations, declinations, coniunctions, and sundrie configurations, but also marketh what mutations, alterations & effects they cause in the elementarie region, whereby he is taught to take ỳ which may be to his profit and gaine, & eschue, or else mittigate, & equallie beare, what is thereto contrarie, & hereof it came to passe, ỳ the greate Astoligian, Claudius Ptolomæus durst boldly affirme, that

The wise by prudence and good skill,
Shall rule the stars to serue his will.

Yea, & the wise Philosophers and Poets, which did deply, & with no small iudgement behold the figure & shape of man, how he onely among all liuing creatures loked vpward to the heauens, they did constantly affirme, ỳ only for ỳ cause he had giuen to him such countenance, & that right eloquentlie the Poet setteth out in these few vearses.

Pronaquè cum spectant animalia cætera quęquè,
Os homini sublime dedit, cælúmq; videre
Iussit, & erectos ad Sydera tollere vultus.

Where all things that doo breath,
doo on the earth their lookes cast,

God when man he did make,
gaue him so great a grace:
On Sunne, Moone, and eke Starres,
that he his eies might fast:
Also to view the skie, and that with vpright face.

And heere by the waie I gather, that this countenaunce was not giuen man onely to gape, gaze, stare, and tote on the Heauens, but wysely to consider the wonderfull forme and frame hereof, howe incessantlye it turneth and moueth about the center of the earth, and that the heauens are as fresh & lustie at this present to fulfil their course, as at their first creation, and that he by considering them, might cõfesse that there is a God, who ruleth them, and hath made them to his vse and profit: but let that passe, and come we vnto the Elementarie region. What thing is therein conteined which he gouerneth not, & taketh of them profit. The winds he gathereth in a small compasse, & by the force of them, he rommeth and walketh on the rough Seas, as on the land. The fishes in the greatest deepes, he bringeth to his handes: the foules of the ayre for all their swiftnesse of winges, he getteth for his pray. Yea, he subdueth one foule, and teacheth it to bring diuers others vnto him. Example of the Hauke, & the partridge, such is the diuine wisdome, & great power giuen to this little world, man. What? doth he not subdue the most strong and fearce beastes, & ouer runne those that are most swift? The Horse being a courageous and proud beast, for all his strength, swiftnesse, and force in his houis, doth he not bridle and tame, & rydeth on him lyke an Emperour, & gouernour? The mightie Lion for all his strẽgth, is made captiue & subiect: the Hart, and Hare, for all theyr swiftnesse, he ouertaketh, and to conclude, what beast is it whome man hath not, or cannot bring in subiection? What say you to the venemous serpents, scorpions, toades, & such as are poysõ to humaine nature, which man doth not onely vanquish: but of them maketh healthful medicines, to expel greuous infirmities. I omit for breuitie, the innumerable træs, plants, fruits, herbes, rootes, gums, stones, mettalls, & earthes, whose secret natures he hath found out, whose ver-

tues,

tues he hath tryed, & whose substãce he doth rightly vse for his commoditie and welth. What artes hath he inuented, what sciences found, & misteries set out: so that of right as I suppose, I may call man Microcosmos, & the lesser world. But me thinke I here one demaund, to what ende is this long tale of man, set out: for with, that you may rightly & duely consider, what a noble & excellent substãce man is off, who is the subiect & matter on which the Phisicion & Chirurgion doe worke. But as touching the Phisicion, I haue nothing to say, & therefore of the Chirurgiõ I purpose somwhat to vtter, both to warn this microcosmos man, of those who vnder the name of Chirurgions, be nothing else but open murtherers, and also to deface these rude Emperikes, & to prick forward the right Chirurgion, & that you may the easelier conceue that which I go about, it behoueth you to know, ỹ chirurgery is most hard & difficult, to attain vnto, & is also a long art, & requireth long time in learning, & also exercising, as both ỹ princes of phisicke Hippocrates, & Galẽ doe testifie, & all wise men doe also confesse: for how can it be but difficil & long, whan ỹ chirurgiõ must cõsider so many diuers temperatures of men, & hyd and secret effects, and properties of nature in them grafted. Wherefore doth one loue porke, an other hateth it as poyson. Some abhor chéese, some frute, & other some wyne? Wherfore doth one concoct & digest meat most hard to concoct. An other is not able without long time to digest the easiest & lightest meates: wherefore is one by drinking of wine made lose bodied, & soluble, wher an other man cannot haue ỹ benefite, no not wt strong & behemẽt laratiues? Furthermore, chirurgerie chiefly cõsisteth in ỹ right vse of profitable experimẽts, which require both lõg time in finding thẽ out, & also in obteining their right vse: & least you may obiect ỹ one may receiue experimẽts of other ỹ are learned, & so easely obteine the art: I must say ỹ the right vse can not so easely be obteined, for to ỹ is required that both the chirurgiõ himself be learned & wise: & further, ỹ he séeth other chirurgions of long experiẽce worke, & put those experimẽted medicines in other right vse: this maketh ỹ art lõger, for ỹ ther spring new infirmites, vnknown

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to them before our time? What saie you to Chamæleontiasis, vulgarlie named Morbus Gallicus? Who euer haue written of the nature, cause, and accidents of it? which is ỹ occasion that so many miserablie haue died, and dailie perish of it: and those that haue receiued health, haue bene so small a number. Againe, the arte is longer to vs Englishmen than to other, when as we are first constrained to learn the Latine tongue, before we can attaine the myndes of these who write of Chirurgerie. There be diuerse other things which also maketh the art long, which for that I wil not be tedious, I cõmit it to thy discretion to consider. Now this I conclude, if the subiect of Chirurgerie be so noble and excellent a creature, the arte must also be noble and excellent, which teacheth to worke on it. If the art be excellent, then it followeth, that it is difficult and harde. Againe, if it be long, then it requireth a long time in the obteining therof, if then that the subiect of Chirurgerie be so noble, the art so excellent and difficill; and so long a time required in the getting thereof, thou maist easilie iudge that the rable of these rude Empertikes (and drosse of the earth, which when they cannot otherwise liue, chop straight waies into the art of Chirurgerie) be no Chirurgions, but manquillers, murtherers, and robbers of the people: such are some Hoslers, Tailours, Fletchers, Minstrells, Souters, Horsleaches, Juglers, Witches, Sorcerers, Bawdes, and a rable of that sect, which would by lawes be driuen from so diuine an art, the exercise of which, for want of knowledge, bringeth sometime losse of member, sometime of life, and sometime both of limme and life. Wherefore I doe admonish the friendlie Reader, whatsoeuer thou art, that hast nẽd of Chirurgerie, not to trust euerie runagate, and him that calleth himselfe a Chirurgion, but consider whether he be learned or not, demaund of him some questions of his arte (which if thou canst not doe of thy selfe, thou shalt finde diuerse in my booke, entituled: The Institution of a Chirurgion) which if he answereth them, thou maist be the bolder to commit thy selfe to him, otherwise trust him not, though he saith he haue cured an hundred of that infirmitie, for Experimentum

tum fallax, experimentes are deceiueable. Now seeing by these fewe lines, you may coniecture what a diuine & excellent arte, Chirurgery is, and how thou maist discerne & know the right Chirurgion from the murthering and busserdly Emperike, I think it good in few wordes, to set out vnto thee, what caused me to publish these few & simple labours of mine. There were two things which moued & stirred mee hereto (louing Reader) the first was the discharge of my talent toward God, and dutie to my native country: the second was to helpe my brethren ỹ Chirurgions, who although they are desirous to attaine their arte, yet bothe because it is so long, and not set out in our vsuall lãguage, they are frustrate of their desire, & the common welth vnfurnished of men of this professiõ. Wherefore musing long with my selfe, what part of the art I might best set out, as most necessarie for thẽ, and most spedely to attaine ỹ arte: I founde none more conuenient then first to write an institution of a Chirurgiõ, in which he might learne the theorike part and principles of the arte: which when as I had finished and brought to an ende: I did not think good there to stay, but thought also it a necessary thing to compile iiii. treatises, comprehending the practise of some parts of the arte. Wherefore I dyd set pen to paper, and wrote an Enchiridion of Chirurgerie, conteining the methode and way to cure wounds, both in similer & instrumentall parts, and eke fractures and lurations, with a new way, of stanching flux of bloud, with out cauterising yrons, by a poulder deuised by maister Perpoint, and mee, whan as any member is taken off from the bodie, & is now in the Hospitals of London, vsed to the great comfort of the sicke people, & safegard of their liues, where commonly before they perished & decayde: & while I thought here to haue staied, behold, wars followed, and controuersie arose, whether the cure of woũds made with cõmon gunpouder and shot, were like to inuenomed woũds, or else wounds confused, which controuercie to decide, I thought for the tyme necessarie, and haue compiled a little volume, confuting the aduersaries opinions, & establishing myne owne, & yet further waying what want

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the Chirurgions had of good and approued medicines belonging to their art, I dyd take out of ỹ best authors, such as might serue herein their necessarie vse, adding thereto such expert medicines as I had both inuented and proued: and this boke I haue called my Antidotarie, all which iiii. bookes, I shall require thée hartely to take in so good part, as I doe offer with free heart, and loue to profit, both thée and other. And here I may not forget Maister D. Cuningham, who was no small helpe to me in diuising the arguments, and perusing the copies written, whose trauailes in this behalfe, I commend to thy thankfull minde, louing reader, there now resteth no more, but to commit my workes with my selfe, vnto thy iudgement: praying thée where the errours haue escaped, both to pardon the same, and also to giue me warning of them. Thus doing, thou shalt encourage mée during lyfe, according to my small knowledge, to trauaile in this my vocation. Fare heartely well, louing Reader, at my poore house in London, the .xii. daye of September. 1563.

¶THOMAS GALE CHIRVRGION,

vnto those that desire the knowledge of Chirurgerie, greeting, &c.

TWO things there are (sore to be lamented) which chiefely haue brought the most noble and auncient arte of Chirurgerie to extreme decaye and ruine: one is, that euery person good and bad, learned and vnlearned, Chirurgion or no Chirurgion, doe without penaltie and correction of lawes, frely take on thē the practise of Chirurgerie. The other thing is, that thē Chirurgians them selues (I speake for the greater number) are vnworthie professours.

The first we cannot redresse, but lament. The second somewhat we both can and will labour to amend. For the greatest number of Chirurgians (I meane those that are thereynto lawfully called) are so rude and vnskilfull in their art, because they haue no methode, no exact way, or yet order in learning the grounds and principles of Chirurgery, either set out of any author whome they are able to vnderstande, or else taught of their maisters and tutours, of whome they should be instructed: so that they are confused in their studies, and make rather a rude chaos, then a perfect arte of Chirurgery.

For now it is come to this point, that if they can get this receyte, and that recept, as they terme it, they thinke they nede no further studie. So that the more recepts he hath, the greater Chirurgion he thinketh himselfe to be: such ignorannce nowe raignes, that receptes beareth the bell. Theorike of Chirurgerie is quite forsaken, or not regarded. For if you shall come to one of these great maisters with their receptes, and aske him what Chirurgerie is, what is the subiect to Chirurgery, what is the ende of Chirurgerie, how many parts doth Chirurgerie consist on: they are constrained to be silent and say mum.

And if anie be impudent (as oft there are) & speake, he geueth

giueth but a ridiculus aunſwere. And yet we will think a man not meete to be called an artiſt or workeman, which cannot tell (beeing required) what his art is whith he profeſſeth, although he hath neuer ſo many inſtruments and toles. For the arte conſiſteth in the right vſe of the inſtruments, and not onely in hauing them. Which vſe is gotten firſt by learing the art, and then by exerciſing the ſame. And to learne the arte, is required a Methode and order, for without it, you ſhall neuer exactly attaine the ſame. Wherfore we now according to our ſmall power & ſimple knowledge, hauing the promiſes, and hartely wiſhing the redreſſe of the ſame, haue ſet out the Theorike part of Chirurgerie in this preſent volume, conteining the principles and ſure grounds of the arte, in ſuch order and methode, as ſhalbe moſt cõuenient for the young ſtudent. And if I haue not herein performed that which I deſired, yet I haue giuẽ occaſion to thoſe that are better learned, to ſet out a more perfect worke of this argument. And I thought good to make it Dialogue wiſe, for that it is moſt apt to teach & inſtruct by. For by this meanes all doubts may be both demaunded and alſo anſwered fullie. And for becauſe it is the firſt booke that one muſt reade which will learne the art, I haue named it The Inſtitution of a Chirurgion, in which he ſhall ſée, not onelie what his art is, but alſo what manner of perſon he muſt be himſelfe, and what conditions are in him required. Furthermore, what inſtruments he muſt be garniſhed with, and how he ſhall in time and place vſe them rightly to the profit of the patient, honour of this art, and his owne worſhip. Wherefore there reſteth no more, but that you take theſe my labours thankfullie, and reade them diligentlie. Fare heartelie well, & forget not to ſpend thy time to the profit of the common weale. At my houſe in London the 20. daie of Maie. 1563.

AN INSTITVTI-
on of a Chirurgion,

containing the sure grounds & principles of Chirurgerie, by Thomas Gale, &c.

The Interloquutors.

Io. Yates. Tho. Gale. Io. Field. Chirurgions.

John Yates.

PHœbus who chaseth awaie the darke and vncomfortable night, casting his golden beames on my face, would not suffer me to take anie longer sléepe, but said: Awake for shame, and behold the handie worke of our sister Flora, how she hath reuested the earth with most beautifull colours, meruailouslie set in trées, plants, hearbes, & floures: insomuch that the olde and withered coate of Winter is quite done awaie, and put out of remẽbrance: at which words of Phœbus my hart quickned in me, and all desire of sléep was eft sones forgotten. Wherfore I am now come into this beautifull medow to recreate my selfe, and gather some of those pleasant hearbes and floures which héere doe grow. But let me sée, me thinke I perceiue two men walking together, and reasoning also verie earnestlie. I will approch nérer vnto them, perchance they be of my acquaintance: Surelie I should know them. I am deceiued if the one be not my friend M. Gale, and the other Maister Field. It is so indéede, wherefore I will go & salute them. God that hath brought vs together into this place, make this daie prosperous & fortunate vnto you both.

Tho. Gale. Brother Yates, the same we wish vnto you, and you are welcome into our companie.

Iohn Field. This faire and pleasant morning will not

suffer Maister Yates to keepe his bed, but leauing the citie, he roameth the fields, to espie out some straunge hearbes, vnto him yet vnknowen.

Iohn Yates. I must of force confesse, that you doe hit the naile on the head, but since my happe is so fortunate as to meete with you both, and that nowe in this pleasant morning, I would leaue off my former determined purpose, and require you to enter into some talke of Chyrurgerie. For since you both were brought vp vnder maister Ferris, (beeing now Sergeant Chirurgion vnto the Quenes Maiestie) one, at whome both for his knowledge and experience, you did not a little profite, and also that you haue had long practise your selues, you shoulde meruailouslie pleasure me, and profite other, for so may it come to passe, that it might bee in the place of an Institution, vnto those that shal hereafter desire the knowledge of Chirurgerie.

Tho. Gale. Your request is honest and reasonable, and therefore not to be denied.

Iohn Field. We were about the like thing when as you saluted vs, wherfore renuing our first talke, we will accomplish your desire.

Iohn Yates. I haue read many authors in Chirurgerie, and yet finde small profit by them.

Tho. Gale. What be the names of your authors?

Iohn Yates. Theodoricus, Brunus, Lanfrancus, Rolandus, Rogerus, Bartilpalia, Guilielmus, Guido, Brunswicke, and Vigo.

Iohn Field. What part of Hyppocrates, Galen, Auicen, Paulus, Rhasis, Albucasis, and Haliabbas, haue you read? these be of greater authoritie, and of whom you shal learne sound doctrine.

Iohn Yates. With these I haue not ben much acquainted.

Tho. Gale. Well, then the next waie is, that you do put out such questions as you would haue answered, and stand in doubt, and also answere to that which shal be demanded.

Iohn Yates. Right gladlie, for there is no waie by which I shall so much and in so short a time profit.

Iohn Field. Truth it is, wherefore let vs begin without further

further detracting of time.

Tho. Gale. Then seeing our talke shall wholie be the institution of a Chirurgion, it were meete and conuenient first to vnderstand what Chirurgerie is. Wherefore answere me I praie you, what call you Chirurgerie?

Iohn Yates. Guydo de Cauliaco (in his booke which hee calleth his Collectorie) defineth it in this sort: Chirurgerie is a part of Therapentike, healing men by incision, vstiõ, and articulation.

Iohn Field. Those wordes are taken out of a Booke ascribed to Galen, being intituled: Introductio, seu Medicus, but he should not haue called it corruptlie Therapentike, but Therapeutike. For Therapeuticòn is that part of Phisicke which cureth: this part consisteth either in curing by conuenient diet, either by medicine, or else by outward vse of the hand. There Galen, (or hee that was the author of the booke aboue saide) affirmeth, how that which healeth by the hand, is a portion of the curatiue part, this helpeth men by incisions, vstions, and reducing the bones in their naturall seate.

Tho. Gale. Yet this is no perfect definition of Chirurgerie, because the definition doth containe in it so much, as to Chyrurgerie is required.

Io. Yates. Then you shall heare another definition out of Guido. He saith, ỳ Chirurgerie is said of this Greeke word Ciros, which signifieth an hand: and Gyos, that is, worke, or operation: as who should saie, Chirurgerie is the science of working by the hand: how like you this definition?

Iohn Field. Worse than the other, both for ỳ it is no definition, but onelie the signification of the name: and also for that Ciros and Gyos, be no Greeke wordes, which shoulde shew that either Guydo was no Grecian, or else that his workes are corrupted.

Tho. Gale. Truth it is, for Chirurgia is derived Apò tês cheiròs caì toû érgou, but both the description of Chyrurgerie, and also the Etymologie and signification of the name, doth right well shew what Chyrurgerie is, although it bee no answere to our demaund.

Iohn Yates. Then I praie you let me learne at your handes what is the true and essentiall definition of Chyrurgerie.

Tho. Gale. Right gladlie. Galen in his booke of medicinall definitions, saith, that Chyrurgerie is the quicke and readie motion of steadfast handes with experience: or an artificiall action in Physicke, done by the handes, whereby is obtained the desired scope. So that you may by these wordes hetherto alleadged out of the Introduction, and the booke of medicinall definitions, forme a definition on this wise. Chyrurgerie is the art which cureth those infirmities and griefs of mans bodie, which are to be done by right vse, and application of the hand.

Iohn Field. In this definition is to be noted, that Chyrurgerie doth not cure all griefes which require help of ẏ hand, but onelie such as are curable. Also it is to be vnderstoode, though in the definition is put no other waies of curing those griefes, but by the right vse of the hand, yet Chyrurgerie hath neede both of that part which cureth by diet, and of that which helpeth by medicine. As is most euident and cleere in great inflamations, & also in those bodies in which Cacochimia (that is to saie, ill Iuse) is found, where the humours are defiled and corrupted.

Iohn Yates. Then it should seeme that Chyrurgerie is so ioyned to the other two parts, ẏ it cannot be wel separated from them, although they be now two diuinct artes.

Tho. Gale. Truth it is, and in the beginning Physicke & Chyrurgerie were both one, and one man exercised both, for so did the Princes of Physick, Hyppocrates and Galen.

Iohn Yates. Then I perceiue that Chyrurgerie is not so base as it is taken for, and that it is of great antiquitie, being the most auncient part of Physick, & was exercised of Emperours, Kings, Philosophers, and Physitions.

Iohn Field. The basenesse of it, and eke small estimation, commeth of the vnlettered and rude Emperikes, who taketh on them the office of a Chyrurgion, when as they know nothing lesse, than what Chyrurgerie meaneth, but as touching the antiquitie of Chyrurgerie, you shall not be-

léeue vs, but regard the words of Cornelius Celsus (which are written in his seauenth booke) who saith. Hec pars cum sit vetustissima, magis tamen ab illo parente omnis Medicine Hypocrate, quàm à prioribus exculta est. This part of Physicke (saith Celsus) being the most auncient, yet it was more increased by Hyppocrates (the father of all Physicke) than of all those that were before his time. Héere you may perceiue that it is the most auncient and eldest part.

Tho. Gale. The same Celsus also setteth out certaine noble persons, who dailie more and more did augment the art, for it did flourish in Aegypt by reason that Philoxenus did exercise it. Also Gorgias, Sorastus, Hieron, the two Apollonij, and Hammonius of Alexander. At Rome also Tryphon and Euelpistius and Neges, were right excellent in Chyrurgerie, and by their learned workes did cause the art not a little to flourish. Podalirius and Machaon (the sonnes of Aesculapius) being with Agamemnon in the Troyan warres, cured the wounded souldiers, as Homere the Gréeke Poet affirmeth.

Iohn Field. All these, as you saie, were right excellent in Chyrurgerie, and famous also, chiefly for curing of wounds and vlcers. In like sort was Chiron, Centaurus, and Achilles, with diuerse other.

Iohn Yates. Séeing that I haue learned that Chyrurgerie is the third part Therapeutike, what Chyrurgerie also is, of the antiquitie and authoritie of the same: I woulde gladlie vnderstand of how many partes it doth consist and stand on.

Tho. Gale. It hath two partes, the one called Theorike, conteining the speculation and knowledge, the other Practike, which is the manuall operation and exercise. The Theorike parte is obtained by demonstration and exact knowledge of the principles of the art, and this both doth inuent, and teach what is to be done, which waie, and also by what meanes. This parte a man may perfectlie knowe, although he neuer doeth exercise anie portion of the Practise: the Practike part is found out and inuented by reason and experience, and it doth rightlie and readilie exercise the same

things that the Theorike hath inuented. This part no man can exactlie obtaine, except that both he doth see other which are skilfull in the art to worke, and also diligentlie exerciseth it himselfe, euer bearing firmelie in minde both what he hath seene of other men brought to good end, and what he hath also done himselfe.

Iohn Yates. Then seeing that you haue vttered vnto me how many parts of Chirurgerie there are, I praie you first begin with the Theorike part of it, and let me vnderstand exactlie what it is, and that being finished, proceede to the practike.

Iohn Field. To set out the Theorike, it will be profitable, but as touching the practike, it were both superfluous and vaine, seeing that the perfect curation of Apostumes and tumours, are set out in the booke of tumours against Nature. Also the true and exact cure of vlcers, is at large opened in another worke, whose Title is, A perfect and exact methode of curing vlcers. Furthermore, the practise of healing woundes both in similer and instrumentall parts. Also of fractures and luxations, you shall finde in his Enchiridion of Chirurgerie. And as touching wounds made with the common Gun pouder and Pellet, you shall receiue the true and methodicall cure, in a Treatise bearing name, Of curing woundes made with Gunne shot, in which Treatise is set out, and also manifestlie confuteth the grose and fond errours, not onelie of Iohn Vigo, Alfonce Ferrius, and Hier. Brunwicke, (which make the shotte venimous, and consequentlie the wounde therewith made, and so the cure to bee lyke as is in venimous woundes:) but also by demonstration hee ouerthroweth all those that bee of that opinion. So that for the practike parte, I do not see what is more to bee desired, except it were some Treatise, in which might bee comprehended the art of Phlebotomie or letting of bloud, and also of scarification and boring, which I hope (God graunting him lyfe) hee will hereafter set out.

Iohn Yates. These be a number of worthie bookes, which doe containe the practise of so worthie an arte, God graunt

you

you long life Maister Gale, to accomplish that you haue yet behinde.

Thomas Gale. Although some perchaunce more busie than learned, and yet more learned than discréete and modest, and yet perhappes more discréete and modest, than a fauourer of those that trauaileth for the profite and vtilitie of other, haue not a little lifted vp the groine, and bent the browe, and with manifest wordes of contumelie rewarded me: yet the loue of my Countrie, and desire to profite those of my profession, shall euer be a sufficient spurre to prouoke me to continue as I haue begun, for true it is that the Poet Pertius writeth.

Fœlix à tergo quem nulla Ciconia pinxit.

Which may right well be englished, although not verbatim, yet in meaning on this or like sort.

O happie man that such hap hast,
thy path to tread so right:
That no serpentine tongue will carpe,
Or long-bild Storke eke spight.

But retourne wée to that from whence we are somewhat digressed, our talke and communication at this present, shall not further extend, than to institute the Chirurgion in the Theorike part of his arte. Wherefore since you haue learned what Chirurgerie is, with diuerse other apt and néedfull thinges: it doth behoue you to knowe the subiect of Chirurgerie. For all Artistes and workemen haue their subiectes and matter on which they doe exercise their arte. So the Mason hath stones and Brickes, which according to his arte hée heweth, squareth, cutteth, and proportioneth. In lyke sorte doth the Carpenter with Woode and Timber, and the Smith with Yron. All which bée accounted subiectes to these artes. And if the Mason, Carpenter, and Smith bée so curious and diligent in knowing, chosing, and considering of stones, Timber, and Yron, which bée thinges of no great valure or estimation, howe much more then behoueth it the Chyrurgion to knowe what the subiect is on which hée must exercise his arte.

Iohn Yates. You haue rightlie saide, and by these your wordes I gather, that the subiect to the arte of Chyrurgerie, is that which is to Physicke: I meane mannes bodie beeing apt as well to sickneese and infirmities, as also to health.

Iohn Field. You haue rightlie aunswered, but this is not sufficent to aunswere that mans bodie is that stone, timber, yron, and matter, whereon the Chyrurgion must exercise his arte: except you also doe knowe the partes of mans bodie, their scituation, nature, and office, as of bones, cartilagies, ligamentes, nerues, veines, arteries, muscles, flesh, and skinne. For I thinke no man so rude, but doeth consider, that without the perfect knowledge of these, howe easilie he shall fall into intollerable errours, especiallie in phlebotomie, in fractures, and luxations, and whereas occasion is offered, to make incision.

Iohn Yates. The more I heare you two speake of Chyrurgerie, the farther me thinke, I finde my selfe from the knowledge thereof. And so much the rather, that by your wordes I gather, how that the subiect and mattier of Chyrurgerie (beeing the bodie of man,) cannot be fullie knowen without the exercise of the Anatomie. Wherefore I cannot a little meruaile at some, who beeing Chyrurgions in name, doe not onelie neglect this knowledge of Anatomie, but also enuieth those that doe therein trauaile.

Tho. Gale. Well, let such go with their wilfull blindneese and obstinate ignorance, and let vs now consider what the end of Chyrurgerie is.

Iohn Field. I suppose that maister Yates knoweth that the end or intention of Chyrurgerie, is to heale all such curable infirmities, as are to be cured by the office and due administration of the hand.

Iohn Yates. I render to you both, heartie thankes, for that by your talke I haue learned what Chyrurgerie is, the antiquitie of it, and noble authors ỹ did professe it, of how manie parts it doth consist on, also what is the subiect or matter on which the Chyrurgion doth exercise his art, and what is the end or finall intention of Chyrurgerie: nowe I will

further desire you to showe me the way to procede in learning and obteining this noble and famous arte.

Thomas Gale. Before we set out the waye how to attaine ỹ knowledge of Chirurgerie, it is cõuenient to show what manner of man a Chirurgion should be whome we should instruct in this arte. For manifest it is, that all men are not to be admitted vnto this mysterie.

John Field. Truth it is, for according to the prouerbe. The diuel made a souter a shipmã, signifying here by, that nature repugning, all thing is in vaine. How vnapt ⁊ vnfit thinke you, is a swine to be taught to hunt: surely as vnapt, as a hound is apt ⁊ fit: but in the admission of one to learne our art, is to be noted the giftes of nature, ⁊ also education from his infancie. For if men exercising artes of lesse estimation and pryce, doe with diligent care chose such as are fit for their facultie and arte: how much more ought the Chirurgion so to doe?

Tho. Gale. It is surelye so, and the giftes of nature required in him that should be a Chirurgion, Cornelius Celsus doth name to be these. He must be a young man, hauing a sure and stedfast hand, voyde of trembling, ⁊ that he hath the vse of the left hand, as well as of the right, a sharpe and quick sight, one voide of all feare, without folish pittie: so that he be not moued any thing by the clamor and noyse of the patient, but minding to cure him, whome he taketh in hand, he shall neither hast more then is mete, or yet make lesse incision then is requisite. Hippocrates in a booke intituled Lex Hippocrates, speaketh of him that shall learne Phisicke, in this sort. Quisquis enim medicam scientiam verè sibi comparare volit, hijs Ducibus voti sui compos fiet. Natura, Eruditione, Loco studijs apto, Institutione à pueritia, Industria & tempore. Primò nanquè omnium, natura est opus. Hac etenim repugnante vrita fiunt omnia, at si ad optima viam natura demonstret, artis eruditio facilè eueniet: quã quidem prudentia sibi comparet oportet, ita vt ab ipsa pueritia institutio accedat, atque hoc in loco disciplinis quidem conuenienti. Prętérea operam sedulò nauare oportet: eámquè ad longum certè tempus, quo ipsa iam insita disciplina, fœliciter

satis, & cum profectu fructus suos ferat. Who so euer (saith Hippocrates) will learne the arte of Phisicke, following these guides, he shall haue his desire. Nature, learning, an apt place for studie, good bringing vp from the childhood, diligence, and time. For first of all nature is to be loked for. For nature repugning, all thinges are frustrate. But if that nature be inclined vnto the best thinges, the knowledge of the art will easelye followe, which it behoueth to get through prudence, so that frō the childhood he be well trained vp, & that in a place apt for studie. Furthermore he must bestow great diligence, & that for a long time, so that learning (being now grafted in him) may happely, & that with increase, bring forth hir fruites. And Hippocrates resembleth the studie of Phisicke vnto agriculture or tillage. For (saith he) what consideration is of those things which the earth bringeth out, the lyke in all points is of ỹ knowledge of Phisicke. For our nature is as it were ỹ fielde, the disciplines of teachers, are like the sædes: also the institution and bringing vp from the childhood, is resembled to the casting of sæde into the ground in dew & conuenient time, the place in which he must learne, is as it were the ayre, giuing norishmēt to such things, as spring out of ỹ groūd. The industrie and diligence bestowed in the arte, is lyke the tillage of the plowman, & last of all, time doth strēgthen these, & suffereth them perfectly to be nourished. And of this time speaketh also the poet.

Assiduo illisu durum cauat Vndula Saxum,

The watry droppes, so moyst and soft
Doth pearse hard stones with falling oft.

Iohn Yates. If this should be obserued among phisitiōs, I do not doubt but ther should be more famous men amōg vs, and fewer rude & bussardly emperickes: but this toucheth nothing the Chirurgion.

Iohn Field. As much as the Phisition, for doe you not remember, that Hippocrates cōprehended Chirurgerie vnder Phisicke, being one portion of the curatiue part?

Tho.

Tho. Gale. Also as touching education, Hippocrates in his boke called De Medico, would haue a Chirurgion follow the warres. For he speaking of the other parts of Phisicke saith. Next is the Chirurgerie of woundes receiued in the warres, and extraction of dartes and thinges in them fixed. For seldome ciuil and intestine diuisions chaunce in all times, yet in externe and outward warres, these chaūce most commonly. Wherefore he that will vse this Chirurgery, it behoueth him to frequent the warres, & follow outward armies, and hostes of men. For so shal he be exercised for that necessitie and vse.

Iohn Field. In dede so dyd Podalirius, Machaon, and Achilles, with other more, of whome mention is made.

Iohn Yates. Yea, but many Chirurgions will not occupie them selues in learning those parts of which they haue dayly exercise. Much lesse then couet to follow the warres, they haue not such a burning zeale vnto their arte.

Tho. Gale. The more pittie, not for their cause, but for the common weales.

Iohn Yates. If all these points are required in him that should be a Chirurgion (as I must confesse they are) how happeneth it, that there are an infinite number of Chirurgions in name, which haue scarse one of these forenamed giftes. And if they haue any, it is boldnesse, for that wanteth not in them, they are as bould, as blinde bayard.

Iohn Field. Yea, but where Celsus praiseth bouldnesse in a Chirurgiō, he meaneth the vertue called fortitude, which wher as necessitie doth require, is not moued with ỹ teares, countenance, & clamour either of the patient, or of the standers by, but minding the health of the sick, according to art, maketh incision, and doth such lyke things.

Tho. Gale. And to aunswere you, why there are such a sort of rude empericks, yea, Hosiers, Tailours, Fletchers, Minstrales, souters, Iugelers, witches, baudes, & to cōclude, (an infinit number which heretofore were prohibited the exercise of this arte) suche as otherwise cannot get any liuing: is for that Chirurgerie is now, as it was in the time of Hyppocrates.

Who

Who saith, ẏ other arts are not exercised without lawes & penalties, but Chirurgerie is frée for all persõs, ẏ more is ẏ pittie, whẽ as so much hurt & damage do dayly spring, thorough ẏ abuse of so noble an arte, so ẏ I am more then halfe perswaded, that Chirurgerie will hardly, or neuer, gather strẽgth again, & florish: except the prince hauing compassiõ of poore deplorated Chirurgerie, doeth by vertue of lawes driue away from hir, these here forenamed enimies.

Iohn Yates. But yet I doe meruaile at those which are as it were Chirurgions by profession, knowing themselues voyde of a number of the poynts required in a Chirurgiõ, that for loue to their countrey, and cõscience sake, they will not yet at the least chose such seruants, as had some of the forenamed vertues. Which if they dyd, there wer yet some hope that Chirurgerie should hereafter florish.

Iohn Field. Their aunswere is, that when the sky fall we shall haue Larkes. They thinke that they should not haue seruants to serue in that vocation. For few (say they) that haue well brought vp their sonne, will put him to the arte, bicause it is accounted so beggerly and vile. Where as in déede, if for a season they would take ẏ more paines themselues, & admit none, but such as should be somewhat mæt, there would be a number glad to studie the arte, bicause it would come to estimation, and be a worshipfull liuing to the professer. But shall I shew you what I thinke is the chiefe cause, science hath no greater enimie, than ignorance, & also the prouerbe is true, like will alway to the like, and hereof commeth it, that such carpenter such chippes, such maister such man.

Iohn Yates. Yet me thinketh ẏ one may be a good Chirurgion, though he haue not all the points reconed of Hippocrates and Celsus. As one might think himself right happie, though he neuer did attaine to Aristoteles summum bonum, or Plato his Idæa.

Tho. Gale. It is one thing to say a good Chirurgion, and an other to say an excellent Chirurgion. But let that passe, I would we had good Chirurgions. And bicause the descriptions of Hippocrates and Celsus touching what maner

of man

of man a Chyrurgion should be) seemeth somewhat to strait to you: I will shew you what conditions Guido requireth in him. Not for that I doe preferre the authoritie of Guido before such fathers and parents of Chyrurgerie, as both Hyppocrates and Celsus were, but because perhaps Crassa crassis conueniunt magis. Guydo requireth foure things in him that is or should be a Chyrurgion. First, that he should be lettered: secondlie, that he should be expert: thirdlie, that he be ingenious, and last, that he be vertuous, & well mannered. These words you shall finde in his Collectorie.

John Field. And as touching these foure pointes, note first, wher Guido saith he must be lettered, he doth meane, he should be learned, & that chieflie in such doctrine as is in his art requisite. That is, at the least he can write, reade, and vnderstand the minde of the Latine author. If he had knowledge in Geometrie for making his incision, for curing fractures and luxations, and also in curing malignant vlcers, knowing what figure would most speedelie vnite & ioyne the lips of the vlcer, it were verie commendable. Naturall Phylosophie is a goodlie ornature to the Chyrurgion, for it sheweth him what resulteth when as there is diuerse and sundrie simples mixed togither: but I will go to the second point: he must be expert, that is, he must be garnished with much and long experience, which is excogitated by firme & certaine reasons, and by them also confirmed, otherwise hee is to be accounted rude, & an Emperike, if he hath not reason annexed and ioyned to his experience. Thirdlie, saith Guydo, he must be ingenious, vnto which there are fiue thinges principallie required. First, is the readie and good conceiuing, then a firme and sure memorie, next a sound & right iudgement, after an easie calling thinges to minde which he haue heard or seene, and last, a liuelie and sharpe readinesse in finding and inuenting remedies. The manners which Guido would haue in a Chyrurgion, are reckoned of Hyppocrates and Celsus, which briefelie I will number: they must be bolde and without feare in such cures as are without perill, and whereas necessitie requireth. Also in cures that be doubtfull, not to be rash & hastie, to be gentle

and

and curteous, toward the sick patient, to be friendly and loving, toward those of his profession. Also, wise and circūspect in Prognostications. Last of all, he must be chast & temperate of bodie, mercifull toward the powre, and not to gredie of money, and this is sufficient touching the discription of him, that must be admitted in Chirurgerie. Now let vs talke of the instruments wherewith a Chirurgion ought to be garnished.

Iohn Yates. That is wel saide, and of those instrumēts I would gladly haue vnderstanding.

Thomas Gale. And so you shall, and for the surer and sounder doctrine, you must note that instruments are saide two maner of wayes, for either they are medicinall, or else instrumēts of metal: as Iron, Leade, Tinne, Copper, Siluer, and Gold. The medicinall instruments are medicines, as potiōs, emplaisters, cataplasmes, cerotes, vnguēts, oyles, balmes, trochise, waters, and such other. But principally as touching vnguents, ỳ Chirurgion (after Guydo his minde) ought alwayes to haue in redinesse fiue sundry vnguents, aunswering to fiue intentions curatiue of Chirurgerie, ỳ is to saye, for to suppurate and maturate, he must haue Basilicon, to mundifie and clense, Apostolicon, to incarnate and cause flesh to grow: he shall prepare vnguentum Aureum, to conglutinate with, he shall vse vnguentum Album. And where as any accidence chaunce, as dolour & paine, he shall occupie vnguentum Dialthęum. But I shall not nede to make any longer processe of medicinall instruments, when as I haue (as I suppose) abundantly shewed in my Antidotarie, not onely all the principall intentions curatiue, required in Chirurgerie, but also haue set out medicinall instruments, both simple and compound, required in this art, as also their compositions, vse, and vertues. There are also set out, proper medicines, dicated and apted to the seuerall parts of mans bodie, as head, breast, stomacke, longs, liuer, splene, kydnes, bladder, and such lyke, as is proued of Galen in his worke intituled Secundum locos. Although many be of the contrary opinion. And among the rest, I will show you a notable history, I thinke to many knowen, as well

Phil-

Phisitions and Chirurgions, as other worshipful & honest. It fortuned ỳ in London. 1562. that there was a fray made, and the one was thrust through the brest vnder the pappe, and out vnder the left shoulder blade, so that of force the longs were persed through. There were diuers Phisitions called vnto the wounded patient, & they all affirmed constantly, death to follow. I also being called vnto the same patient, did also affirme, that death would follow, except he receiued a certaine potion, of which I had experience in the like case in the warres, in England, Fraunce, Scotland, and other places: and he in deede receiued it, and so the longes were preserued from putrifaction, & the congeled bloud was expelled out, the wound cleansed, and finally, by the arte of Chirurgerie he was restored to his perfect helth.

Iohn Yates. That man doe I right wel know, his name is Henrie Smith, a water man, he was hurt at Queene hiue, and he is yet liuing, and in good health.

Iohn Field. Wel then, let vs speake of metalline instruments, of which some of them are general: so called, for that they doe generally serue in all wounds and vlcers: & there are particuler instrumẽts, seruing to seueral vses, or parts of the bodie. Yet haue I hard that diuers affirme, how that in wounds generally, there needeth no other instruments, then an incision knife, to dilate and inlarge the wound, & so with the fingers to take out the things fired, whether it be pellet, splente, arrowe head, or what else so euer it be: but the errours of these are so grose, as requireth no aunswere, seing that through such kindes of incisions, it happeneth the great veines and arteries to be cut, & so great flux of bloud to follow, (beside the dolour and paine which followeth, & many times losse and mutilation of the member) as is in no case tollerable.

Thomas Gale. Truth it is, but touching generall instruments, those which are in most vse, and ought to be had in readinesse of the Chirurgion, are these: incision sheares, an incision knife, a flewme, a lance, and all this serue to cut and enlarge a wound.

A cauterizin ỹ̃ to cauterize w̃, & stãch flux of blod, a paire

of

of pincers or nippers, to take of plaisters, splegeants, and things fixed in the wound, a probe to serch the wound with, a croked hooke, a nedle and a quill to sowe and stich with.

Iohn Yates. And what be the instruments which are called proper?

Iohn Field. Proper instruments are these: a Trappan, seruing to the head, when as the scull or cranium is fractured, speculum oris, and speculum matricis, also gossipium, seruing for lurations and fractured bones, a Siringie masculine, and also femine setons for the necke, Aleuatorie and long næles of woode, to draw through the wound: also gosebilles, Crowel billes, and diuers other described and set out of Albucasis, Celsus, Tagaltius, and others.

Tho. Gale. These instruments be of meruailous vse, & without which the Chirurgion can neither perfectly, nor without great griefe and perill, doe that is required: and among the rest, in my iudgement, the Trappen is most necessarie, and of an excellent inuention in hurtes of the head. For without it where cranium is fractured, bruised, or else any of the inward pannicles depressed, you shall little preuaile. I my selfe haue vsed it with greate profite diuerse times, and especiallie once in Cambridge shere, which I would declare vnto you, but that I shoulde bee somewhat tedious.

Iohn Field. Nothing lesse, but rather pleasant, for by vttering of things done great profit may insue, & we haue decreed to spend this daie in the talke of Chyrurgerie, wherfore we desire you declare that historie, and we will giue diligent eare.

Tho. Gale. Right gladlie. Anno 1559, a seruant of one M. Wroths riding to the fields, and leading a young horse in a halter, tied fast about the arme of the seruant, the horse being wilde and not broken, starting aside, vnhorsed the man, and drew him by the arme about a great field, so long, that what with striking, what with drawing, haling, and pulling, being wearied, he stode still vntill companie came and vnlosed the halter, and toke vp the man halfe dead, and conueied him vnto his maisters house. Chyrurgions were

sent

sent for, who finding the seruant speechlesse, and without remembrance of anie one whom he sawe, they not perceiuing the cause hereof themselues, neither yet could be shewed of the patient the place affected, departed and left him vncurable. M. Wroth sent for me, and I seeing him speechlesse and without remembrance, coniectured the hinder parte of the head to be hurt, and smitten of the horse, which I was more certaine off, when feeling that part, I found it soft. Wherefore I taking off the haire, did first make incision, and after that set a Trappan on his head, and bored Cranium through, and toke out the peece of bone, which done, there issued out much bloud, blacke in colour, and drawing to putrefaction out of the confused and broken veines, the next daie following the seruant spake, and came againe to his perfect remembrance, and I vsing things in this cure as art required, God restored the man in my handes to his perfect health. I coulde also shewe you other examples, where the like chaunces haue happened, and the Chyrurgions eyther not knowing, or wilfullie neglecting this profitable instrument, haue brought the patients to their last end. So happened it to a seruaunt of Maister Pagets in Philpot lane, 1538. and diuerse other, whom for breuitie I do let passe.

Iohn Yates. This was a worthie cure, and this is a noble instrument, but the Chyrurgions which neglect the vse of this or the like instruments, are of the opinion of that the rude Emperike Smith was, who in a foolish booke of him published, did inueigh against Chyrurgions which trappaned the head in anie griefe of the same, and seemeth to himselfe as it were another Thessalus to ouerthrow the famous authors and inuenters of this instrument, when (in the iudgement of the learned) he was no more to them comparable, then the light of a sparke of fire is equall to the most radient and shining beames of beautifull Phœbus.

Iohn Field. This now spoken of instruments, (which a Chyrurgion must haue in readinesse) shall suffice, now let vs shewe the methode and waie how the person being fit to be admitted to Chirurgerie, may learne the art, least that confusedlie he learne that first which should be last, and so

set the cart before the horse, to his no small hinderance.

Tho. Gale. And for this there is to be followed and obserued two precepts: first, that we procede from things cõmon vnto those which are particular, or from thinges vniuersall, vnto more particular. As first to know an inflamation, then how many kinds of inflamations there are. The second precept is, that we begin at things knowen, and so procede vnto those which are lesse knowen, as first in the curation of wounds, we must beginne with a simple wound, which done, we shall procede to the curation of compound wounds. So in like manner in vlcers, first to know & cure a simple vlcer, and then to take in hand compound vlcers, beginning with those that are lesse compound, & haue smalleſt accidents, and so to procede vnto those ỹ are more compound, & haue most & greatest accidents ioyned with thẽ: the like is also to be obserued in other arts & sciences, as in iudging of coulours, first to know white & blacke, then other coulours, which are not so manifest, according as they come & spring of ỹ mixture of these two, now knowing & cõsidering these ii. precepts, it is necessarie for ỹ right vse of his instruments medicinal & metalline, to consider two things, ỹ is to say, things called accordig to nature, & thigs against nature.

Iohn Yates. I praie you what are those which are called according to nature? and how many be they in number?

Io. Fi. Guido nũbreth these things which are called according to nature, to be sixe, ỹ is to saie, helth, ỹ cause of health, ỹ effect of health, strẽgth, custome, & cõplection. And health is defined to be an effect according to nature, apt to perform the actions of the same. Iohn Yates. And what doe these sixe things according to nature teach and shew me?

Tho. Gale. Because the Chirurgien is natures friend, & minister, these shew you that you must conserue and keepe them by their like, and also to expell their contraries, which would destroy and ouerthrow them.

Io. Yates. And wherof do these sixe things spring, & by what things shal I conserue them? for although you say vnto me, ỹ they are conserued & kept by their like, yet is it not sufficiẽt to my vnderstanding, except you shew me what they are.

Iohn

Iohn Field. I wil tel you these vi. things, which are secundum naturam, spring of seuen naturall things, entering the composition of mans bodie, that is to say, foure elemẽts, fire, aire, water, earth: complections, as hot, cold, moist, and drie, foure humors, bloud, choler, fleame, & melancholie, members of mans bodie: vertues animall, vitall, & natural, with their operatiõs & spirits, of these seuen natural, springeth health, & ỹ other rehearsed, which are according to nature. The conseruatiõ of health doth cõsist in ỹ right vse of vi. things, named in latine, res nõ naturales, like as in ỹ abuse of thẽ, the decay of health & breeding of sickneſſe and infirmities followeth.

Tho. Gale. It is right so, & these fiue are called, aire, meat, and drinke, motion & quiet, sleepe & watching, repletion, and inanition, and the perturbations or affections of the minde.

Iohn Yates. I trust I am sufficientlie taught how to vse my instruments, according to the indication taken of ỹ things which are accordig to nature: now I pray you let me vnderstand what those things are which are against nature, how many they are in number, and what indication is to be taken of them, for the further vse of my instruments.

Iohn Field. Those which are against nature, are so called, because they are contrarie to the same, and doe further destroy and ouercome nature, & are vtter enimies to health, and these are three in number, sickneſſe, ỹ cause of sicknes, and the accident. The cause of sickneſſe, is that effect contrarie to nature, which goeth afore the sickneſſe, & prouoketh the same, and there are accounted of Galen, and the Grecians (whõ I follow) two causes of sickneſſe, ỹ one being outward, called Procatarctike, or cause primitiue: the other is within vs, & is named the cause antecedent or precedent, or cause interne. Sickneſſe also is defined of Galen, to be an affect against nature, of which ỹ action of nature is first hurt, & vitiated. And the same Galen doth also make three kindes of sickneſſe generallie, according to the parts of mans bodie, in which they are as in ỹ similer parts, sicknes is called intemperature, which is either hot, cold, moist, or drie, or else hot & moist, hot & drie, colde and moist, colde and drie, and if it be in the instrumentall partes, the sickneſſe is named ill

constitution or conformation, but if sickness happen both to similer and instrumentall partes, then it hath to name, solution or diuision of continuitie. Also the accident is one effect against nature in lyke sort as the cause of sickness and sicknes it selfe is, but it differeth frō thē in this, ỹ lyke as ỹ cause goeth before sickness and prouoketh it, so doth the accident followe sickness, like as the shadow doth the man. Now this word Accident, is taken generallie, of which wee will nothing speake, and it is vnderstode more straightlie or properlie, so is Accident three waies diuided, for either the action is hurt and quite abolished, as blindnesse in the eie, or else diminished, as dimnesse of sight, or else the actions is corrupted, as the sight depraued, and for the indication which is taken of these three thinges against nature: note these two great, (and of all men allowed) conclusions. Contraria sunt contrariorum remedia. Also similia conseruantur similibus. Like as things which are according to nature, are conserued and kept by their like: so also thinges contrarie are remedies for their contraries, & therefore these three things against nature sheweth you that they are to be expelled and put awaie by their contraries: as for example, solution of continuitie being sickness both of similer and instrumentall parts, sheweth that he must be put awaie by his contrarie, that is, vnition and ioyning againe. Also heate is put awaie by coldnesse: coldnesse by heate: drinesse by moystnesse: and moistnesse by drinesse: & so in like sorte in other sicknesses, the indication is taken of the contrarietie, do you now vnderstand this?

Iohn Yates. Right well, so that now I doe perceiue that the right vse of my instruments medicinall and metalline, is taking of things according to nature, which sheweth the conseruation by like and agreeable medicines, and of things against nature, which teacheth me to applie things contrarie, whereby I may take awaie all that which is agaynst nature, but if you will be so good as to set out (though it be in briefe wordes compendiouslie) those things against nature, which falleth vnder the handes of the Chirurgion, as you haue made plaine to me those thinges which are according

ding to nature, I should thinke my selfe so much bound, as hardlie I shall be able to recompence, for although I know that things contrarie to nature, are to be remoued by their contraries, yet if I haue not the exact knowledge what those things are, I shall verie hardlie be able to applie and vse their contraries.

Thomas Gale. It is surelie so, for how much wide you are in knowledge of the sickneſſe, so farre wide shall you also be in finding out apt and conuenient remedies, & those perticular griefes or affects against nature, which are subiect to Chirurgerie (as Galen witnesseth in ỹ 14. booke. 13. Chapter of his Therapeutike methode) are for the most part reduced to fiue titles or chapters, ỹ is to wit, tumors against nature, wounds, vlcers, fractures, & luxations, there be other things besides these, which require ỹ vse of ỹ hand, but these rehearsed perfectly knowen, ỹ other wil be easie to attain to.

Iohn Yates. Then I praie you begin first with tumors, and those being finished, procéede to the rest.

Iohn Field. First it behoueth you to knowe that this woorde Tumour (called in Greeke Onchos) is not ỹ which Auicen and the Arabians name Apostema, and the Latinistes call Abscessus. For Tumour is a generall name to all Apostumes and Tumours, whereas this woorde Apostume stretcheth no further but onelie whereas Phlegmon is turned into mattier, and thrée other Tumours called Atheroma, Steatoma, and Meliceris, so that this word Apostume is not so large and generall a name as Tumour is: and therefore abused of Guydo and other, where they call all Tumors against nature, by ỹ name of Apostumes.

Iohn Yates. Why sir, be not all tumours against nature?

Tho. Gale. No forsoth, for then it had bene for him superfluous to haue added these woordes against nature. And Galen in his booke De tumoribus prçter naturam, maketh thrée kindes of Tumours. One that is Secundum naturam, according to Nature: as the brames, muscules, and other eminences of mans bodie. The second is called aboue nature: when as these fore-named parts are increased more than their naturall forme & figure, but yet in such sort, ỹ the

parts can do their offices. The last kinde of tumor is called Tumor against nature, because they hurt the action of the part where it infecteth.

John Yates. I doe now call to remembrance M. Doctor Cuningham, who made also the same diuision of tumours, 1563. when he read the booke of Galen, of tumors against nature, to the Chirurgions of London in the hall, but I praie you let me learne what a tumor against nature is?

Tho. Gale. Out of the same booke of Galen you may gather this definition. A tumor against nature, is an augmentation or swelling, exceeding the naturall figure of ỹ same, and hurteth the action of the same. But Auicen saith, that an Apostume (for so calleth he a tumor) is a sickenesse compound of three kind of infirmities, ỹ is to saie, of intemperatures, of ill constitution, & solutiõ of continuitie: these words you shall finde in the first booke of his Canon.

John Yates. How many kinde of tumors are there?

John Field. Guydo and other writers of his time, make three kindes of tumors: Apostema, Pustula, and Exitura. Apostuma he calleth a great tumor, in which ỹ matter (whereof it springeth) doth offend rather in quantitie than qualitie. Pustula he doth make a lesser tumor, in which the matter doth hurt by qualitie rather than quantitie. And this tumor the Arabians call Bothor. The third, which Guido nameth Exitura, is that which the Grecians doe properlie call Apostema, and the Latinists Abscessus.

Tho. Gale. But the Grecians do make differences of tumors, according to the substance whereof they do spring. So shall there be but two kindes of tumors generallie, that is to saie, Humoralis, springing of humors, and Flatuosus coming of windie spirites: this Guido tearmeth Apostema ventosum.

John Yates. And how many differences is there of tumors which doe spring of humors?

Tho. Gale. Two, simple, and compound.

John Yates. How many simple be there?

John Field. There be also two, hot and colde.

John Yates. Why are these tumors called simple and com-

compound?

Tho. Gale. They are called simple, when as they spring of one sincere humour, without the mixture of other. And they are called compound, when the tumor commeth of two or more humours.

Iohn Yates. Wherefore are the tumours called hot or colde?

Thomas Gale. They are called hot, because they spring of hot humours, and named colde by the like reason, because they are engendered of colde humors.

Iohn Yates. How many hot tumors be there, and how many colde?

Iohn Field. Diuerse and sundrie, as you shall perceiue by the processe of our talke, but the most famous are foure, springing of the foure humors simplie, without the mixture of other of these two, &c.

Iohn Yates. Which be they?

Iohn Field. One commeth of blood, and is called Phlegmon, in English, Inflamation: an other springeth of cholar, and is called Erysipelas, or S. Anthonies fire: and these be hot tumors. Another commeth of fleame, and is named Oedema: the fourth is engendered of melancholie, and hath to name Scirrhus. These two tumors are cold, all other simple tumors, are aptlie reduced to these foure.

Iohn Yates. And what be the compound tumors?

Tho. Gale. They be diuerse, and varieth their names according to the mixture of humours, & the humor is mixed equallie, or inequallie, if they be mixed equallie, then the tumor is called Phlegmõ & Erisipelas, but if they be inequallie mixed, then the tumor taketh name of the humor which surmounteth, as blood surmounting choler in a tumor: it is called Phlegmon Erisipelatodes, if fleame be mixed with blood in stead of cholar, in forme as is aforesaid, then the tumor is named Phlegmon Oedomatodes, and if blood mixed with melancholie surmount, it is called Plegmon Scirrhodes. So in lyke case there are three Tumours, which take names of the humoures mixed with Choler, Choler hauing the dominion, as when

bloud is with cholar, they call the tumor Erysipelas Phlegmonosum. If fleame, Erysipelas Oedematosum, and if melancholike, then ỹ tumor hath to name Erysipelas scirchosim, in like maner, fleme hauing dominion in the moisture with anie of the other thrée humors, the tumor is first called Oedema, & then if choler be mixed with it, they adde this word Erisipelatosũ: if bloud, the tumor is called Oedema Phlegmonosũ, & if melãcholie, thẽ is it named Oedema scirrhosũ. And to conclude, the like is to be said of melancholy, whẽ as anie of the other thrée are mixed with, as Scirrhos Plegmonosus, Scirrhus Erysipelatosus, and Scirrhus Oedematosus: bloud, choler, or fleame, being vnequallie mixed with melancholy.

Iohn Yates. What profit ensueth to the Chirurgion by knowing the mixture of these humors, in tumors against nature?

Iohn Field. Great profite, for by knowing the true mixture, hé is taught thereafter accordinglie to varie his medicines, for like as a simple tumor hath a simple cure, & is cured by his contrarie, so a compound tumor hath a compound cure, & is cured by his contrarie: as for the more plainer vnderstanding, if the tumor be mixed of fleame and melancholie equally, then shal you equallie mixe such medicines together, as are conuenientlie vsed in Oedema & Scirrhus, but if fleme & melancholie be inequilie mixed, and the greater portion is fleme, then in the composition you must in like manner put the greater portion of such medicines as you sée in Oedema, & the lesser of such as are applied in Scirrhus, & this rule & precept is to be diligentlie obserued in all compound sicknesse, and for because the mixture of these tumors is so necessarie for a Chirurgion, as you may right wel perceiue by that which is now spoken: behold this table which sheweth you all the mixture & names of tumors against nature, which for the great profite would be cõmitted to memorie of him that will haue the methode of curing compound tumours against nature.

Iohn Yates. You promised to shew the tumors which are referred to the foure principall simple tumors, Phlegmon, Erisypelas, Oedema, and Scirrhus.

Iohn Field. And that we promised, we will performe, first uttering their names: and that being done, we will shew you their definitions. And we will begin with sanguine tumors, which are referred to Phlegmone, and then procede to the rest. There are referred to Phlegmone, Phygethlon, Bubo, Phyma, Dothienes, Anthrax, Gargareon, Paristhmia, Aneurisma, Gangręna, and Sphacelus.

Iohn Yates. What is Phlegmone?

Tho. Gale. Galen affirmeth Phlegmon (or as we cal it in English, an inflammation) to come of the flux of bloud by ỳ greater veines & arteries, vnto those which are lesser, & from them vnto those veines which are least of all (which bicause they are no greater then haires,) are called capillares. These veines being filled with this continuall flux of bloud, part issueth out by the mouthes of the veines, & part by the cotes of the same, whereby the bodies spaces are filled, inflamed, distended and stretched out. And this tumor Galen calleth the inequal intemperature of the muscle. And note, that there are twe kindes of inflãmations. One which is called vera inflammatio, and this springeth of good & naturall bloud. The other is named Non vera, comming of ill and vnnaturall bloud, and this is common to all inflammations.

Iohn Yates. What call you Phygethlon?

Tho. Gale. That which Celsus nameth Panus, and this tumour is an inflammation of the glandilous parts in the necke, armepits, and grine, which if they be indurated after this inflammation, there commeth tumors, which is named Chœrades, in latine Strumas, and Guido nameth them scrofulas, and then this tumor is numbred among flegmatike tumours. And is with vs vsually called the Kinges euill, bicause the Kings and Quęnes of England (by a diuine & peculier gift of God) do cure such as are molested with this infirmitie, when as no arte of Chirurgerie can take place. And this differeth much from that sickneſſe which the Latineſtes name Regium morbum.

Iohn Yates. Wherefore is it called in Grękе Chœras?

Iohn Field. Either of stones apearing by the Seas, or

else of swine which are often vexed with this tumor.

Iohn Yates. As touching Bubo, Guydo calleth it a flegmatike Apostume, wherefore I will let that passe vntill we come to the reasoning of the same.

Tho. Gale. You seeme to accuse vs of errour or ignorance, when as we should number flegmatike Apostumes as you call them, amongest sanguine tumours. But I will this affirme boldlie, that Guydo either meaneth some other tumor, which he so calleth, or else he repugneth manifestlie with Galens authoritie, for Galen maketh Bubo, a simple inflamation of the glandulous parts in that flankes.

Iohn Yates. I doe not accuse you, but rather shew you Guido his minde, which seeing that it doth not agree with Galens, I must giue place, & also prefer Galen before Guydo. Wherefore I praie you proceede with the other inflamations, and shew me what the tumor is which the Greekes cal Phyma.

Iohn Field. This tumor is a push which will presentlie as it were, come to suppuration, and it is called Phyma, by similitude it hath with puffes or mushrumps, springing out of the earth. And there be two kindes of these tumors, one comming of heate, another of colde, but we in this place doe number onelie the hot tumor among inflamations.

Iohn Yates. Dothienes followeth next in order.

Tho. Gale. Dothienes in Greeke is called of Auicen, Aldemurenul, of Celsus Furunculus, with vs a felone or Cats haire, & is a sharpe swelling with inflamation, chancing in the fingers with dolour, and turneth to matter speedely, and these often haue a feauer ioyned with them.

Iohn Yates. What is Anthrax?

Iohn Field. That same which we cal Carbunculus, and is an vlcerous tumor, springing of grose melancholike bloud putrified. This tumor followeth great inflamations, & there are two kindes of Carbuncles, then one more gentle and benigne, the other pestilentiall & mortall, and the Carbuncle is both with pustles, and also without.

Iohn Yates. Guido maketh difference betwixt Anthrax and Carbunculus.

Tho. Gale. There is no difference at all, but that Anthrax is a Greeke word, and Carbunculus a Latine. For Guydos difference, where he maketh Anthrax a maligne tumor, is no other thing than the pestilentiall Carbuncle. But his deriuation of the name is more rediculous, where he saith ỳ Anthrax is said of Antra, which he saith signifieth ỳ hart, but in what tongue Antra is died for the heart, ỳ he left vnwritten: sure I am, ỳ it is neither Latine, Greeke, nor Arabike word.

Io. Yates. Well, then I am herein satisfied touching the Carbuncle, what define you Gargareon to be?

Iohn Field. Gargareon called in Latine Columella, is an inflamatiõ of Vuula, like as Paristhmia or Tonsille, are inflamations of the kirnels, situated in the beginning of the iawes, Guido and other of his sect call them Amigdalas.

Iohn Yates. Anecurisma is next.

Tho. Gale. This tumor is no other thing than a dilatatiõ or rather relaxation of ỳ arteries, wherby the bloud & spirits are dispearsed, making a soft tumor, which being pressed wt ỳ fingers, seemeth to vanish awaie, but ỳ fingers taken agai awaie, the tumor commeth to his wonted bigneſſe againe.

Iohn Yates. If you doe in like sort set out what Gangrena and Sphacelus are, then you haue finished all such tumors as are referred to Phlegmon.

Iohn Field. Galen in his second booke which he wrote to his friend Glauco, defineth Gangrænam to be a mortification of the member vnconfirmed, springing of great inflamations. And Sphacelus, called of diuerse writers Aschachilos, and of the Latinists Syderatio, is the exact and confirmed mortification of the member.

Iohn Yates. Then by your wordes I gather, that both Gangrena and Sphacelus follow after great inflamations, & that they two differ in this, that Gangrena is as it were in growing and increasing euer more and more towarde mortification of the member, & Sphacelus is when as Gangrena ceaseth to corrupt further the member, & that is now perfectlie mortified and dead, voide of all naturall heate, bloud, spirits, and feeling.

Tho.

Tho.Gale. You haue rightly sayde.

Iohn Yates. Then seeing we haue thus ended such sanguine tumours as are referred to Phlegmõ, I pray you in lyke maner procede in the cholerike tumours which are of like affinitie with Erysipelas?

Tho.Gale. We will so doe. Unto Erysipelas are referred Herpes, Phlyctenę, Epinyctides, and Hydroa. But first we will define what Erysipelas is, and then procede to the rest.

Iohn Yates. I thanke you that you will accomplish my request and desire.

Iohn Field. Erysipelas being of much affinitie wõ Phlegmon, called also of the latinistes, Ignis sacer, of vs, wild fire, or Sainct Anthonies fire, is a fluxe of choler, staying about the skinne, nothing molesting the flesh. And it differeth frõ Phlegmon, first that there is no pulsatiue dolour in it, then that in the inflammation of bloud, the coulour is alwaye redde: in Erysipelas, the coulour is yelowish pale. Last, that Phlegmon is an affecte of the muscules, and Erysipelas is onely of the skinne, and this is to be vnderstode of Verum Erysipelas.

Iohn Yates. Is there any more then one kynde of Erysipelas?

Tho.Gale. Haue you forgotten that which was before rehearsed of compound tumours? And that there was Erysipelas, Phlegmonosum, Oedematosum, and Scirrhosum? These be cõprehended in dęde vnder the name of compoũd cholerike tumours or Erysipelas illegittimum.

Iohn Yates. So then you make two kindes of Erysipelas verum: and also illegittimum.

Iohn Field. It is right so. And that which is illegittimate or not right Erysipela is also diuided into two kindes. The one comming of the groser and thicker sencere choler, and is named Erisipelas, with vlceration, and the other choler hauing other humours mixed with it, as I saide before.

Iohn Yates. Seing then that I vnderstand what Erisipelas is, & how many kyndes also there are of them: I pray you let me vnderstand what Herpes is, for that followeth next in order.

Iohn

Iohn Field. Herpes is that tumour and affection of the skinne which Hyppocrates so doth name, of corroding and deuouring the skinne, for Herpo is that which is called in latine Serpo, whereof commeth Herpis quasi serpens. And there is two kindes of Herpes, one called Herpes Estiomenos, so called, bicause it eateth and deuoureth: the other is named Cenchros, in latine miliaris, for that the tumour is like Millit sæde.

Iohn Yates. Guido doth speake of Estiomenus, in this wise. Estiomenus est mors et dissipatio membri: et propter hoc dicitur Estiomenus, quasi hominis hostis, cum putrefactione et mollificatione membri.

Tho. Gale. Where Guydo saith, that Estiomenus is the death and dissipation of the membred, and for that is called Estiomenus, as who should say, the enemie of man, cõming with putrefaction & mollification. I doe little in my iudgemẽt alow him, first that he leaueth the princes of Phisicke, Hyppocrates, Galen, and Paulus, and followeth those of smal learning and authoritie: and then that he will sæme to interprete that tongue in which he had small knowledge. For wher did he euer reade among the Grecians, that the tumour Estiomenus, was confounded with Spnacelus, which in dæde is the mortification of the member. And againe, where learned he the derivation of Estiomenus, to be hominis hostis. But this may yet sæme tollerable in Guido, whẽ that Auicen giuing occasion of errour to other, comprehending both kyndes of Herpes, vnder the name of Formica, doth also most absurdly comprehend myrmecias, (that is to say, Formicas, and is a kinde of wartes) vnder the name of Herpes, and so confoundeth both together. But this shal suffice touching Herpes.

Iohn Yates. Then let me learne what Phlyctenæ are.

Iohn Field. Aetius in his. xiiii. booke and. lxiii. Chapter, saith, that they are pustules comming of sharpe choller, like to the blisters which commeth of scalding water, & bring no vehemẽt dolour or paine, which being brokẽ, there floweth out a yelowish humour, continuing vnto the third, or sometime the fourth day.

Ihon

Iohn Yates. And what doth these kinde of pustules differ from those which are called Epinictides?

Tho. Gale. Very much. For Epinictides, be the most ill and malignant kinde of pustules, be swart, and leady in coulour, with great and vehemēt inflammation about thē, and these being opened, there is found a slimy exulceration in them. This tumor is neuer greater then a beane, and is called Epinictis, because commonly they spring in ỹ night season, and then most molesteth the patient. The Arabians call this tumour essare, or saire, and Plinie nameth it pustula lyuens.

Iohn Yates. There it remaineth those tumors which the Grecians doe call Hidroa, and the latinistes Sudamina.

Iohn Field. Auicen nameth them planta noctis, and Rasis, Alhasaphum. These are certaine cholericke pustles, comming of much and abūdant swet, which through the sharpnesse thereof, doe exasperate and vlcerate the skinne: and thus haue you learned the famous and notable chollerike tumours, wherefore we will now conuert our talke to such as are phlegmatike.

Iohn Yates. You doe meane such as are referred to Oedema, doe you not?

Tho. Gale. Yes verely, & they be called by their names, Atheroma, Steatoma, Meliceris, Hidrocele, Ascites, Leucophlegmatia, Chæras, Bronchocele, and Hydrocephalon: and as touching Oedema, it is thus defined.

Oedema, is a tumour soft, lose, and without dolour or griefe, springing of fleume, and it is deuided into Oedema, that is a disease, and into that which is Symptoma, or accident. Of this Galen maketh mention in the. xiiii. booke, iiii. Chap. of his Therapeutike methode. The true Oedema, is ỹ which foolishly the barbarous Chirurgions call Vndimia.

Iohn Yates. I remēber Guydo nameth it both Vndimia, and also Ydemea, and Cimia, but let that passe. I pray you set out those three famous apostumes flegmatike, which you call Atheroma, Steatoma, and Meliceris.

Iohn Field. This apostume called in latine Abscessus, and of Haliabbas, Selaa, of Auicen, Nodi, haue diuers names

after

after that thing which is in euery of them conteined. For Atheroma, which is a tumour of like coulour on all parts, and without paine and dolour, conteineth in the neruous cotes, a slymy humour, and lyke a pultesse in substãce. And sometime there is foũd in it haires, skales like bones, and hard things as they were stones. And Steatoma, that is to say, Adipinus nodus, or a fattie knot or a tumour, is an augmentation of fatnesse against nature, gathered in some part of the bodie. Meliceris or Nodus mellæus, is a round tumour, hard, & voyde of griefe, in which the neruous coates doe continue an humour lyke in substance to Honey. And all these three effectes are first smal and little, and so by little and little, augement and ware, and are conteined with in their seuerall filmes or coates.

Iohn Yates. What define you Hydrocele to be?

Tho. Gale. Hydrocele is that which in Latine is called Hernia aquosa or Humoralis, and is a tumour springing of a watry humour, gathered in the purse of the testicles.

Iohn Yates. And what is Ascites?

Iohn Field. It is one kinde of the dropsie, and this tumour is, when that a serose humour is conteined betwixt the inward coate of abdomen and the intestines. This coate is called Peritonæum.

Iohn Yates. Leucophlegmatia followeth next.

Iohn Field. It is also nemed Anasarca and hypostarca, and is an inequall tumour going through the whole bodie: this may in my conceit be aptly termed, an vniuersall Oedema, of all the bodie: as touching Cherades, we haue spoken among Sanguine tumours.

Iohn Yates. There yet remaineth two tumours Bronchocele, and hydrocephalon.

Tho. Gale. Bronchocele, is a tumour in the throte called also Bocium, and it is a great and round swelling of the necke betwixt the skinne and Aspera arteria, in which is conteined sometime, flesh, sometime lyke Honey, fatnesse, or a pultesse, & sometime saith Celsus, ther are found haires mixed wt bones. Also Hydrocephalõ, is a watrie tumour ingẽdred for ỹ more part in ỹ heds of childrẽ, or else it coms of

grose

grose bloud collected in any part of the head: there be foure kyndes of this tumour, one when the humour is betwixt pia mater, and the brayne: the second, when the humour is collected betwixt the coates and the bones: the third, is betwixt pericranium and the bone: the last is, betwixt the skinne and the bone. And thus we haue set out the most notable kindes of flegmatike tumours.

Iohn Yates. Seing that you haue finished three kindes of tumours, Sanguine, Cholerike, and Flegmatike, now I pray you let vs speake of Melancholicke in like sort.

Iohn Fielde. Vnto Scirrhus, are referred, Cancer, Elephãtiasis, Satirasmus, Psora lepra, Enchimoma, melasma, varices, sarcocele, Polipus Verruce, acrochordines, myrmeciæ, & such lyke. And first we will take our beginning with Scirrhus, you shall note that there are reconed of Galen, two kindes of Scirrhus, one that is exquisite, the other not exquisite. The exquisite Scirrhus, is defined to be an hard tumour against nature, without dolour or fæling, and is incurable. The secõd kinde of Sirrhus, is also a tumour against nature, hard, but not altogether insensible, & therefore curable: although it be not without difficultie.

Iohn Yates. Now seeing I haue learned what Scirrhus is, & also how many they are, I pray you proceede to Cancer.

Tho. Gale. Cancer called of ỳ Grecians, Carcinoma, and Carcinos, is an inequall tumor against nature, horrible to beholde, of watrish coulour, and with great paine. It is called Cancer, of a figure and similitude it hath with the sea Crabbe: for like as in that, the fæte are on both sides of it, so on this tumor, the veines being filled with grose melancholike humour, they are swolne and discended like as it were the fæte of a Crabbe. Or this tumor may otherwise be called Cancer, bicause it doeth so inseperably cleaue to the place where as it once is firmely fixed. And there be two kindes of Cancer, one that is with vlceration, and is called Cancer vlceratus, an other that is without vlceration, and is named Cancer occultus.

Iohn Yates. What is Elephantiasis.

Iohn Field. It is an vniuersall Cancer of the bodie, and

is that

is that which the later writers of the Arabians name Lepra, and Saint Lazarus sickneſſe: it taketh name of the beaſt called an Elephant, becauſe of the greatneſſe of the affect, length, and roughneſſe of the ſkinne. It is alſo named Leontiaſis, becauſe of the loſe & rugoſe tumour of the ſkin. This ſickneſſe is terrible, contagious, and in the number of thoſe infirmities placed, which are contagious.

Thomas Gale. And when this tumour is yet in the beginning. It is not called Elephantiaſis, but Satyriaſmis, taking that appellation of the Satyres, whom the Poets deſcribed to be deformed and monſtrous.

Iohn Yates. Seeing that Elephantiaſis is not Lepra Grecorum, I praie you ſhew me their difference?

Iohn Field. Galen in his booke of Definitions, doeth define it in this ſort. Lepra is mutation of the ſkinne into an habite againſt nature, with aſperitie and itching, dolour & ſcales, and occupieth diuerſe parts of the bodie, and there is no ſmall affinitie betwixt Lepra and Scabies, both being affections of the ſkin, both ſpringing of melancholie Juſe, & they differ in figure, for Lepra occupieth & deuoureth deeplie the ſkinne in round figure, and caſteth ſkales like fiſh: & Scabies called alſo Pſora, infeſteth rather the vpper part of the ſkinne, and is diuerſlie figured.

Iohn Yates. Enchymoma followeth next, and Melaſma.

Tho. Gale. Galen in his booke De tumoribus præter naturam. 10. Chap. ſaith, that they are tumours happening to olde men through the contuſion of the veines, whereby the bloud flows out of the coates of the veines. Of theſe ſome be blacke, ſome betwixt blacke and red in coulour, and they come of ſmall and light occaſions.

Iohn Yates. The next tumors are varices, in Greeke called Cirſous, which I take to be the ſwelling of the veines through too great flux of groſe and melancholike bloud. And I haue moſt commonly ſeene them in the ſhanks & teſticles.

Iohn Field. And thoſe be the proper places for this tumor: like as the two tumors next following, Sarcocele and Polypus, haue their peculiar parts which they doe infeſt, as Sarcocele is a fleſhie tumour growing in the teſticles, and is

called in Latine Hernia carnosa: the other is a fleshie branch springing in the nosethrils, and letteth the operation of the same, and it taketh name of the flesh called Polipus, for like as that fish hath many legs, so also hath this tumor many roots wherby it cleaueth and groweth to ỹ nosethrils.

Tho. Gale. It is right so, and Verruca which is next in order, is a certaine tumor appearing in the vppermost part of the skinne, it is named with vs a Wart, of this sort be Acrochordones, & Myrmeciæ. Acrochordon is a round wart hanging as it were by a thræd, and thereof taketh name, and is called in Latine Verruca pensilis, & Myrmecia is also a kinde of warts which groweth dæper and is hard and fixed to the skinne, narow aboue, & broade beneath, prouoking dolour & paine, and is blacke in colour. And thus haue wæ finished and declared vnto you al the notable tumors which are referred to the foure simple, Phlegmone, Erysipelas, Oedema, and Scirrhus.

Iohn Yates. Yet among all these I heare you make no mention of Morbus, which I thinke is to be numbred among tumors against nature?

Iohn Field. I doe not well vnderstand your meaning, for many a tumor is called Morbus, for Morbus is a Latine word, and all sickneſſe and infirmities be called Morbi.

Iohn Yates. Yea, but I meane that scab which the cõmon Chirurgions calleth the Morbus, and the Morbus cause, and the better learned nameth it Morbus Gallici.

Tho. Gale. It is a great thing to be trained vp in ignorance or barbarous doctrine at the first, for euer after doe what you can, they will haue some tast thereof, as right excellently the Poet Horatius said.

Quo semel est imbuta recens seruabit odorem,
Testa diu, &c.

Which is as much in effect to be vttered in our vsuall language, as

With what thou first filst thy vessell,
of the same long time it will smell.

And this may right well be verified with those of our time, one rude Emperike called it the Morbus, and a num-

ber

ber followeth him in his follie, & another because he would seeme cunninger than the rest, with as much ignorance nameth it Morbus Gallici, breaking the olde Phicians head, and yet will not or cannot giue him a plaister. But if you will vse that vsuall name, you might haue named it Morbus Gallicus, or Lues venerea, and so haue obserued congruitie in speaking, but as touching the names of that contagious infirmitie, which is vsuallie named Morbus Gallicus: in my opiniõ they all do nothing expresse ỹ nature of ỹ sickness: & like as the authors which write of it, varieth in the names, so doe they both in knowing the disease, and cure of ỹ same.

Iohn Yates. What then shall I properlie call it?

Iohn Field. The same that Maister Doctor Cuningham hath inuented a similitudine cum Chamęleonte bestiola. That is, he calleth it Chamæleontiasis. The reasons hereof, the definition, cause, signes, prognostications, & new kind of curation, he hath expressed in a booke thereof written, which I trust he will hereafter publish.

Iohn Yates. And doth he not number Chamæleontiasis among tumors against nature?

Tho. Gale. Nothing lesse, for he accoũteth all those tumors, swelling, knots, vlcers, and such like, infesting the bodie of man, but as accidents, and no part of the infirmitie, neither laboureth he so much in these, as in expelling the sickneſſe which bringeth forth these accidents, for these are to be remoued without difficultie or great trauaile.

Iohn Yates. I iudge his new inuented waie of curation to be extreme & dangerous to the patient, for both ỹ fumes, vnguents, and straight order of diet, with the wood, are wel knowen to be daungerous, and yet many times doth not that which they promise, but yet if his waie be perfect, it is the more to be liked, and he worthie of praise.

Iohn Field. His waie is voide of daunger, easie to the patient, exact also and perfect.

Iohn Yates. Seeing then that Chamæleontiasis, vulgarlie tearmed Morbus Gallicus, is not to be numbered among tumors against nature: I praie you proceed to ỹ other part of your diuision, for I remember ỹ you said there were

thrée kindes of tumors, the first you called Humoralis, because it doth spring of humors, the second Ventosus, for that it is engendered of spirits, the third you tearmed Tumour Varius, because they haue mixed causes, somtime of humors and spirits mixed, and sometime of other causes. Therefore I praie you now let me learne how many tumors are referred to ventosus tumour.

Tho. Gale. The most famous are two, Tympanites and Priapismus.

Iohn Yates. What is Tympanites?

Tho. Gal. That which Hippocrates nameth a drie dropsie, and is a tumour springing of windie spirits, collected betwixt Peritonæum and the intestines. And if you smite the bodie of the patient vexed with this tumor, it will giue forth a sound like to the Tympanie, and hereof it first take name.

Iohn Yates. And what tumour is that which is called Priapismus?

Iohn Field. Priapismus is a tumour of the yard, whereby it is dilated out in length and breadth through vaporous spirits, filling the nerue called Neruus cauernosus constituens colis substantiam.

Iohn Yates. There remaineth to speake of those tumors which you tearme Tumores varios.

Thomas Gale. There doth so as you saie, and these be the notablest of those tumours, Vitiligo, Exanthemata, Parotides, Mentagra, Epiplocele, Enterocele, Enteroëpiplocele, Bubonocele, Exomphalos, Arthritis, Podagra, Chiragra.

Iohn Yates. What call you Vitiligo?

Iohn Field. If you will generallie take it, it signifieth a foulenesse and straining of the skinne, comming of the ill disposition of the part, which cannot make good assimulation of the nourishment, & there be two kindes of this tumor, the one named in Gréeke Leuce, of the Arabians Albaras, and in Latine Vitiligo alba, which is a mutation of the skin into more whiteneſſe. The other is named Alphos, & of Auicen Morphea, & we vsuallie call it ỹ Morphew, & there are two kindes of Morphew, the one white called of Celsus Leuca

Alphos

Alphos, the other blacke, & he tearmeth it Mela, and Alphos is deriued of this Greeke verbe Alphenein, which signifieth to alter or chaunge, and so doth the Morphew alter & change the coulour of the skinne.

Iohn Yates. And what tumors are those which ỳ Grækes doe call Exanthemata?

Thomas Gale. They be puckules and tumours breaking out of the skinne, bringing with them feauers, and many other accidents. And there are two sorts of them, one higher springing of thin and cholerike blood, the other broader, & commeth of melancholike and grose blood. The first kinde we call the small pockes, in Latine Morbilli, the other the Measels, and Variolę in Latine.

Iohn Yates. Parotides followeth next in order.

Iohn Field. Parotides be inflamations which happen to the kirnels that are behind the eares, and they spring sometime of sincere blood, sometime of fleame, sometime of cholar, and sometime of melancholie. And herein note the prouidence of nature, for she hath made the rare and lose parts called kirnells, to be as emunctories for the noble parts. As the kirnells behinde the eares serue to the braine. Under the arme pis, seruing to the spiritual members. And the kirnells in the grine doth receiue ỳ superfluities that commeth from the liuer, when as it doth eronerate and purge it selfe, and this is most manifest in pestilentiall constitutions, in which these noble members thrust and expell the venim to their purging places.

Iohn Yates. As for Mentegra, you need not to speake of, for I know right well, it is no other thing than Morbus Gallicus, or Chamæleontiasis, as the booke bearing the name of Mentagra doth testifie.

Tho. Gale. And yet both you & the author of that booke do herein misse the cushion, as sure as you make your selfe of this. For this tumor which Plinius calleth Mentagra & Impetigo, in Greeke Leichin, sprang first among the Italians in the time of Tiberius, and is a deformitie of the skinne, beginning for the most part at the chin, and will speedelie turne into leprie, and cast off scales like fish. And Galen

witneueth in the v. booke and v. Chap. Secundum loca. That Impetigo will turne into Lepram. Therefore what difference is betwixt Mentagra and Chamæleontiasis, it is easily conceiued, the one hauing Causam occultã, as I may tearme it, and the other Manifestam.

Io. Yates. And what iudge you Epiplocele to be?

Iohn Field. I will not onelie speake of that, but also of the other kindes of Hernia, which followeth next. And first you must note that Epiplocele is a Greeke word, compound of Epiploon, which the Latinists call Omentum, & we name it the Caule, and Cele, which signifieth Ramex or Hernia, so that Epiplocele is a tumor comming when as Omentum falleth into the purse of the testicles. And by the like reason Enterocele taketh name, when as the intestines falleth into the foresaid place. And Enteroepiplocele followeth, when as both Omentum and the intestines fall in Scrotum, or purse of the testicles. Furthermore Bubonocele is a tumor called in Latine Inguinis ramex, and happeneth when as Peritonæum is ruptured or wounded by the flankes. Exomphalos is a tumour pertaining to the ouerthwart muscles of Abdomen, which being relaxed there followeth a starting or eminencie of the nauell.

Tho. Gale. My brother Yates doth the readierlie conceiue ỹ differences of these kinds of Hernia, for that he hath a peculiar way of curing some of thẽ, especiallie of Enterocele, or hernia intestinalis, as Guido termeth it, wherfore we will no longer stand in vttering the differences of thẽ, but proceede to Arthritis, Podagra, & Chiragra. For I thinke ỹ daie will scarcelie suffice to declare that which yet remaineth, & therefore as touching Arthritis, you shal note and consider, that it is a tumor comming of the flux of humors into the ioynts, & is named in Latine Morbus articularis. And so is this tumor common to all the ioynts of the bodie, except it bee the hands and the feete.

Iohn Field. Yea, for if this flure happeneth to the hands, it is named Chiragra, and if to the feete, then it is called properlie of the place, Podagra.

Iohn Yates. These diseases of the ioyntes be grieuous & painfull,

painfull: haue they no other cause but the flure of humours?

Tho. Gale. The flure of humours is but the interne or antecedent cause, which commeth of the primitiue, but it is no part of our mindes, to set out either the causes, signes, or curation of tumors, seeing that we haue done that in our bookes of the methodicall cure of tumors against nature.

Iohn Yates. Seeing that you haue now spoken of all the notable and famous tumours against nature, I praie you turne your talke to woundes, which Auicen and those that follow him calleth Plaga.

Iohn Field. Before we enter further herein to set out the differences of wounds, it is conuenient to know what a wound is. And the most part of writers agree that a wound is the solution of continuitie made in the parts of the body without putrefaction or mattier.

Tho. Gale. Yea, for when as putrefaction or mattier doth followe, then it leaueth the name of a wound, and is called an vlcer.

Iohn Yates. And may a wound degenerate into an vlcer?

Thomas Gale. Yea forsoth, and so doth most partes of wounds, especiallie if they be great, and in such partes as may not be cured with balmes.

Iohn Yates. And how many differences bee there of woundes?

Iohn Field. Manie, but the chiefe and principal and that also are necessarie, are numbered to bee three, and wee will shew you whereof the differences spring.

Iohn Yates. Doe you so.

Tho. Gale. Guydo and other famous writers of his time taketh the difference of wounds, of three things. The first is taken of the nature of the parte, in which the wound is made. The second difference springeth of the substaunce or essence of the solution of continuitie. The third difference springeth of the difference of the diuision, or solution of continuitie.

Iohn Yates. And how are the wounds called. Those differences commeth of the nature of the part in which that

wound is.

Iohn Field. It is called a wound in the similer part, and a wound in the instrumentall part.

Iohn Yates. Then to know these wounds exactlie, it doth behoue to know these parts of the bodie, which you called similer and instrumentall.

Tho. Gale. It doth right so, and it is so called a similer part because it is simple, & may be diuided into like partes, and that also which is required to the constitution of the organike or instrumentall parts. Such parts of the bodie are flesh, fatnesse, arterie, veine, nerue, tendon, ligament, bone, and such like, & those be named instrumentall parts, which are made of these simple or similer partes. And the instrumentall partes are the head, eie, nose, tongue, heart, liuer, longs, armes, fæte, and a great number of such like, and euerie of these partes haue their seuerall vse and office, as more largelie appeareth in the booke of Galen, intituled, De vsu partium.

Iohn Yates. And how many sundrie wounds are there in the similer parts.

Iohn Field. There be three, which are taken of the substance of the similer parts, for it may be in the similer parte, which is soft, as wounds made in the flesh, and fatnesse, or else in the harde similer parte, as wounds in the bones, or finallie it may happen to the meane similer parte, which is neither harde nor yet softe, such bee those woundes in the Veines, Arteries, Nerues, Tendons, and Ligamentes.

Iohn Yates. And what difference is there of the wounds in the organike or instrumentall parts?

Tho. Gale. There is a three fold difference of these wounds according to the parte affected. For either the wounde is made in the principal parts, as in the heart, liuer, or braine, or else in those partes which serue these principall parts, as wounds in Aspera arteria, the throate, and bladder. Or it is in the organike parts, which are not seruiceable, to anie of the principal, as wounds happening in the nose, eie, eare, hand, foote, and such like.

Iohn

Iohn Yates. Then there be fiue differences of woundes taken of the nature of the part, three in the similer, & three lykewise in the instrumentall parts. Now let me vnderstande the difference of wounds taken of the essence of the solution of continuitie.

Iohn Field. There is a twofolde difference, for either it is a simple wound, or else it is a compound wound.

Iohn Yates. What is a simple wound?

Iohn Field. A simple wound is solution of continuitie, newly made, being voyde of accidents or other affects with it complicated and ioyned.

Iohn Yates. And what is a compound wound?

Tho. Gale. The contrary to a simple wound. For it is solution of continuitie, hauing one or more affects and accidents complicated and ioyned with it.

Iohn Yates. You haue now showed two kinds of woũds, the one taken of the nature of the wounded part, the other of the essence of ỹ solutiõ of continuitie, there yet remaineth to set out, such as spring of the proper difference of solution of continuitie.

Tho. Gale. There doth so as you say, and the proper differences are taken of two thinges. That is to wit, of the quantitie and of the figure?

Iohn Yates. And how be the woũds named, which haue their difference of quantitie.

Tho. Gale. They are called by these names, a great or little wound, a long or short wound, a broade or narrow wound, a dẽpe or shalow wound, and an equall, or else an inequall wound.

Iohn Yates. And how be those woundes named which are taken of the figure of the wound?

Iohn Field. They be thus termed, a right wound, an abliquike or croked wound, and a retort wound. There are besides these three principall differences of wounds: other wounds, although they be not proper, as a wound disrupted or broken, a wound which is cutte, a wound partly broken, & partly cut: also, a wound in the beginning, middest, or ende of a muscle, & such like, but these differences alredie

numbred shal suffice, as touching the Institution of a Chirurgion, in this part.

Iohn Yates. I suppose no lesse. But what vtilitie springeth by knowing these differences of wounds?

Tho. Gale. Right great, for you shal not rightly and methodically cure them, except you know their differences. For of them is taken the prognostications, the intentions curatiue, the inuention of medicines, and maner of curation, for you will not a like prognosticate lyfe and death to the patiens, of a simple wounde made in the flesh, and of a great wound made in the ventricles of the braine.

Iohn Yates. That is verely so, for the one is without perill and daunger, and the other euer mortall and deadly. Although Galen affirmeth, that his maister Pelops, yet being a liue, he saw a young man wounded in one of the former ventricles of ỹ braine, & that he was restored to helth.

Iohn Field. In dede those wounds for the more part are deadly. And where as Galen in his eight boke de vsu partium, reherseth that history, he maketh it miraculous, & that the yoũg man came to health, rather by ỹ godnesse of God, then the helpe of arte. But let vs returne from whence we are digressed. A grene and shalow wound, voide of accidents, haue not the same curatiue intentions, that a dẽpe & holow woũd hath, with which is also annexed, inflamation, flux, dolour and paine.

Iohn Yates. That is more clearer then Sunne at myd daye, as the saying goeth.

Tho. Gale. And touching the inuention of medicines, how say you, will you inuent lyke for woũds in the nerues and ligaments, that you will for those in the flesh? or in woundes of the braine, that you will in woundes of the handes?

Iohn Yates. No verely, nor I thinke none so rude, that will so offende.

Iohn Field. I pray God ther be not. But to the right vse of medicines takẽ of ỹ difference of woũds, would you in a woũd in which is inflamatiõ, & deperditiõ and losse of flesh, apply incarnatiues to cease inflamation or contrary wise?

Iohn Yates. That were a point of extreme demency and madnesse.

Tho. Gale. Well, then this last vtilitie springing of the difference of wounds, sheweth you how to apply your medicines, and whan also: which must be first, and which next.

Iohn Yates. No man can that denie. Wherefore seing that we haue passed ouer the differences of wounds, it followeth next in order, that we doe procede to vlcers.

Iohn Field. And ỹ you may the better vnderstand those things which hereafter shall follow, it is requisite to learne first what an vlcer is.

Iohn Yates. Then I pray you define what an vlcer is.

Iohn Field. An vlcer is defined to be the solutiõ of vnitie in the fleshie partes, hauing more dispositions letting & hindring the adglutination of the same, of which commeth mattier, and other lyke filthinesse.

Tho. Gale. You may also briefely define it, following Auicen in this maner. An vlcer is the solution of continuitie, made in the flesh, conteining mattier and pus.

Iohn Yates. And whereof are vlcers ingendred?

Tho. Gale. They spring of woũds ill hãdled, of pustules and apostumes, comming to vlceration.

Iohn Yates. And doth vlcers spring of wounds?

Iohn Fielde. They doe. For when as a wound doth once cõteine mattier, it is no more called a wound, but an vlcer.

Iohn Yates. How many kinde of vlcers be there?

Tho. Gale. There be two kindes, a simple vlcer, and a compound.

Iohn Yates. And what is a simple vlcer?

Tho. Gale. A simple vlcer is a solution of continuitie, with mattier, voyd of accidents & complication, with other affectes. And here you must note, according to our supposition, that when I say a simple vlcer, I meane not one simple infirmitie or sickenesse: for I am not ignorant that euery vlcer doth consist of intemperateneſſe, solution of continuitie, & sometime also of ill cõposition And therfore when I speke of a simple vlcer, I meane that which is opposite or cõtrary to ỹ vlcer, which is cõplicated with many affectes.

Iohn

Iohn Yates. Then by your wordes I gather, that a cõpound vlcer is solution of continuitie in the flesh, hauing mattier, & diuers affectes with it ioyned. Now I pray you let me vnderstand how many differences there be of vlcers.

Iohn Fielde. The most notable vlcers are. vi. in number.

Iohn Yates. Which be they?

Iohn Field. Their names in Latine be these, Vlcus sanioſum, Virulentum, ſordidum, cauernoſum, putridũ & corrodens. And we must by cirtumlocution, make them plaine vnto you, for the defect of apte wordes in our language.

Iohn Yates. And can these haue no other names.

Tho. Gale. Yes forsoth.

Iohn Yates. How many wayes?

Tho. Gale. Fiue principall wayes.

Iohn Yates. Which are they?

Tho. Gale. First an vlcer may be named of humours, next of ſanies or mattier, then of accidents, after of the ſickneſſe, last, of ſimilitude with some liuing thing.

Iohn Yates. Which way name you vlcers of humours?

Iohn Field. Those which spring of bloud, are called sãguine, of choler, cholerike, of fleume flegmatike, and of melancholie, melancholicke.

Iohn Yates. And how are they called which come of ſanies or mattier.

Tho. Gale. You must note that vlcers be named of ſanies, foure ſundry wayes.

Iohn Yates. How so?

Tho. Gale. Bicauſe ſanies is called by foure names.

Iohn Yates. Which be they?

Tho. Gale. Sanies, Pus, Sordicies, and Virulentia, & hereof cõmeth that of Sanies, the vlcer is named a ſanious vlcer, of Pus, a purulent vlcer, of Sordicies, a filthie vlcer, and of Virulentia, the vlcer is named a virulent vlcer.

Iohn Yates. Before you procede further herein, I praye you define me what Sanies or mattier is.

Iohn Fielde. Sanies is a nouriſhment corrupt, which nature could not digeſt: and note, that there is two kindes of Sanies, good and laudable, and also ill and nought.

Iohn

Iohn Yates. What call you good mattier or sanies?

Iohn Field. It is called good, when as it is white in colour, light and equall, voyde of stincke and horrible smell, and is also digested.

Iohn Yates. And what define you ill mattier or sanies?

Iohn Field. It is that which is contrary to the good. A corrupt nourishment in which the substance is inequal, indigested, ill smelling, and diuersly discoloured.

Iohn Yates. What is that you call Pus, of which the vlcer is named purulent.

Tho. Gale. It is ill mattier or sanies, comming of nourishment and superfluities of the weke member, which tendeth to corruption, through the naturall heate altered into an vnnaturall state.

Iohn Yates. I pray you let me learne what Virus is.

Tho. Gale. It is subtile and thinne sharpe sanies, ingendred of thinne watry humours, which through the abundance, the heate can not digest and ouercome.

Iohn Yates. There yet remaineth to speak of that kinde of sanies which you called sordicies.

Iohn Field. It is grose mattier ingendred of the groseneſſe of humours.

Iohn Yates. Well now returne againe to the names & appellations of vlcers. How I pray you are vlcers called after accidents, which the Grekes call Symptomata?

Tho. Gale. It is called of corrosion a corroding vlcer, in Greke Phagedenicum, of putrifaction vlcus putridum, of dolour and paine, it is called vlcus doloroſum.

Iohn Yates. And how is the vlcer called of sickneſſe.

Iohn Field. It is called in this maner of Cancer, a cancerous vlcer, so in like manner of Fistula, the vlcer is called Fistuloſum or vlcer fistulate.

Iohn Yates. Seing you are come to that talke of a fistula, in knowledge of which, and also exact curation, you are not a little commended: I pray you define what a fistula is.

Iohn Fielde. It is an hollow and deepe vlcer, hauing a straight orifice, and the holowneſſe of the same is hard, out of which many times floweth matter, and the fistula hath

many

many denominations according to the place in which it is, for when it happeneth onely in the flesh, it is called fistula carnosa, in the veines venosa, in the arteries, arteriosa, in the nerues or sinnowes, neruosa, in the cartilagies cartilaginosa, in the muscules musculosa, in the bones ossea, and also of teares and drops, which it putteth forth, it is named fistula lachrimalis: so in ano, it is called fistula ani.

Iohn Yates. Well, now turne we againe to the last part of the diuision, and shew mée how vlcers are called of similitude.

Tho. Gale. I will. The Ante or Pismere (in latine Formica) crépeth and maketh holes: and of like sorte, the vlcer which crepeth and maketh many holes in mans body, is hereof termed Formicosum vlcus: and also of the holow caues of the ground called cauernæ, the holow vlcer is named cauernosum: and so in like sort of other things, for of the similitude the vlcer taketh name.

Iohn Yates. I heare you not make any mention of those famous and notable vlcers called Teliphea and Chironia vlcera, neither can they be comprehended vnder any of the fiue principall kindes of vlcers.

Tho. Gale. Yes forsoth, but Galen whom I folow, accõpteth those differences of Teliphea and Chironia vlcera, superfluous, and he comprehendeth them vnder the name of Phagędenicum, or Corrodens vlcus. Therfore we may aptly place them among corroding vlcers, which is the first kinde of the notable vlcers, before rehearsed.

Iohn Yates. And be all these kindes of vlcers of like facilitie in curing?

Iohn Field. No verely, for there be some which are easely cured, and other also which will hardly or not without great difficultie, receue curation.

Iohn Yates. Which be those that will easely be cured?

Iohn Fielde. Such vlcers as happen in persons of good cõplexions, whose bodies are norished wt good bloud, & haue no abundance of superfluous moistnesse: for Auicen saith, that in bodies of the best complexion, the vlcers are more spedely healed.

Iohn Yates. Which vlcers are hard to be cured?

Tho.Gale. All those vlcers which followeth after any sickneſſe.

Iohn Yates. Wherefore should those vlcers be so rebellious,and hard to receue curation?

Tho.Gale. Bicause nature doth exonerate & vnburthen hir selfe of the dregges and reliques of ill and vicious humours.

Iohn Yates. Are there no other vlcers,but these that be hard to cure?

Iohn Field. Yes,and such be all vlcers which happen to persons hauing accidentally their bodies moiſt or drye.

Iohn Yates.Giue me an example of those bodies which accidentally are moiſt.

Iohn Field. You nede no other exãple to set before your eyes,then persons hauing dropsies,and women with child, where vlcers happen in such bodies,they will not cicatrize bicause of abundance of superfluous moiſture.

Iohn Yates. I thinke it so. But if that the great moyſtneſſe,do let ẏ vlcer to be cured,then in bodies that be dry,it foloweth ẏ vlcers to be easely healed.How happeth it,therfore ẏ you affirm vlcers in dry bodies to be hard of curatiõ?

Iohn Field. And yet in these my words,I doe not cõmit any errour.For I speke not simply of all dry bodies, but of those that ware dry accidentally,such be the bodies of them that haue hecticke feuers,& marasmus.In these the vlcers, for defect of good bloud, cannot consolidate,but with great difficultie.

Tho.Gale. And you haue also the lyke example in olde men whose vlcers will hardly receiue cure for the defecte of good bloud,they being not able, for the imbecilitie of naturall heate,to concoct and digeſt,their meate.

Iohn Yates. Then by your wordes I doe finde, that in thre sortes of people,the vlcers wil not without difficultie be cured,ẏ is to saye, in those where vlcers foloweth great sickneſſe,& in bodies which are accidẽtally moiſt, & those also which are likewise dry. Now before we finiſh our talk of vlcers,I would learne of you what putrifactiõ,corrosion, &

digestion is, the knowledge of these is right profitable in vlcers.

Iohn Fielde. It is so, and note that, putrifactiõ according to our authors Chirurgions, is defined to be a transmutation of the whole substance of the bodie or part of the same, springing of outward and vnnaturall heate: which being contrary and deadly enimie, to naturall heate, doth corrupt and destroy the same.

Tho. Gale. And corrosion is a consumption of the flesh which commeth through sharpe humours, which resolueth, consumeth, and dryeth, the substance of the nourished part, which being resolued the substance of the flesh is diminished and vlcerated.

Iohn Yates. These two, putrifaction and corrosion, séemeth to be as you saye, although for want of naturall Philosophie, I cannot herein iudge, but it behoueth the learner alwaies to beleue and credit the teacher: but what is digestion?

Iohn Fielde. Digestion is taken in two wayes, one way it is taken for an orderly distribution of the worke of naturall heate made for the augmentation and nourishment of the parts. The other way it is a disposition of natural heat ordeined to the preparation of humours, whereby the humours are made redie to be thrust out by the vertue expulsiue, and this last way is that which the Chirurgion ought to consider.

Iohn Yates. Now you haue thus finished tumours against nature, wounds, and vlcers, it is time to intreate of fractures. Wherefore I pray you let me vnderstand what a fracture is.

Tho. Gale. A fracture is called in Gréeke Catagma, and is solution of continuitie, made in the bone. But the later Grecians as Aetius and Paulus, nameth a fracture, the diuision of the bone, or els rupturing or breaking of the same, or any solution of the bone, violently comming of any outward cause.

Iohn Field. Yet Guydo de Caulico, and other of his time, defineth a fracture to be solution of continuitie of the bone,

not

not comming of euerie cause, but onelie when as it commeth of contusion, and this difference he putteth, for ý, saith he, a bone broken and a bone cut, may be knowen a sunder. For because a cut bone is not to be properlie named a fracture, but rather a wound in the bone.

Iohn Yates. There is no great repugnancie among thē, neither let vs be curious about wordes, so the thing whereof we intreate may be euident and plaine. Wherefore I praie you shew me nowe howe many kindes there bee of Fractures?

Tho. Gale. There be two kindes of fractures, a simple fracture, and a compound.

Iohn Yates. What is a simple fracture?

Io. Field. A simple fracture is solution or diuisiō of cōtinuity made in the bone without anie other affect ioyned with it?

Iohn Yates. What is a compound fracture?

Iohn Field. It is also a solution of vnitie made in the bone, hauing one or more affectes to it connected and ioyned.

Iohn Yates. How many differences be there of Fractures?

Thomas Gale. You must note, that like as there be simple and compound Fractures, so in like manner there bee differences of fractures both simple and compound. Wherefore let me knowe of which fracture you would knowe the difference.

Iohn Yates. I would right gladlie vnderstand all the differences, although for want of knowledge I cannot orderlie demand of you. Wherefore I praie you first to begin with the differences of simple fractures, and then to the compound.

Thomas Gale. That wee will gladlie, and first it behoueth you to consider that there be many and diuerse kindes of simple fractures. For some fractures are ouerthwart, and diuides the bone in sunder, and they are three, Cauledon, Raphanidon, Siciedon, that is to saie, the bones are broken lyke vnto the similitude of stalkes, of hearbes, Raddish, and Cucumbers. There are besides these fis-

sures or rifts made in the bone long wise, called in Greeke Schidacidon. Also there is another kind of simple fractures when as the bone is broken into many small and little pées, and this is named Alphitidon. These be the principall differences of simple fractures.

Iohn Yates. And what are the differences of compound fractures?

Iohn Field. The chiefe and notable being accompanied with sickneſſe and accidents, are these: a fracture with a wound, a fracture having with him ioyned Gangrena, a a fracture with inflamation, a fracture with dolour and paine, a fracture with contusion, a fracture with Callus to much increased and growen, a fracture with too much dryneſſe, & also hardneſſe of Callus, & a fracture with superfluous moisture of Callus, and such like.

Iohn Yates. Are there no other kinds of fractures beſides these two simple and compound?

Tho. Gale. There be no other proper kinds, for of neceſſitie it must be either simple or compound, and Galen maketh but two kindes of simple fractures, a fracture made secundum longitudinem, and a fracture made per transuersum. But Cornelius Celsus addeth the third difference to it, his words are these. lib. 8. cap. 7. Omne os, modò rectum, vt lignũ in longitudinem finditur, modò frangitur transuersum, interdum obliquum, &c. Which is as much to saie, as euerie bone is fractured, either in length, as wood cleaueth, either it is broken ouerthwart, and sometime it is fractured, oblique, or crooked.

Iohn Yates. Albucasis nameth other kindes, as Fracture in Cranio, a fracture in the iawes, a fracture in the nose, a fracture of the spine of the backe, a fracture of the fossiles, & so of other bones.

Iohn Field. He doth right so as you saie, but in my opinion these be no differences of fractures, but rather noteth the part affected.

Tho. Gale. That is most manifeſt, and hereof we have spokẽ in our Enchiridion of Chirurgerie more at large, where we set out the differences of Fractures, & the exact manner

of

of curing them. But because you may the surer beare these differences of fractures surer in memorie, beholde this table which setteth out all the diuisions of them, and if you take paines to commit them to memorie, then you haue in effect the whole Theorike of solution of continuitie, made in the harder parts of mans bodie. (D)

Iohn Yates. I thanke you sir, & I will not omit the great profit which will follow for the present paine. For the gaine will remaine when as the paine shall be quite forgotten. Now for the time of the day which yet remaineth, finish luxations, and what else you thinke conuenient for the institution of a Chirurgion.

Iohn Field. We will accomplish your request, and first note that a luxation or dislocation (which the Grecians also call Exarthrema) is a displacing of the ioynt, and mouing of it out of his natural seat into another place vnaccustomed, whereby the voluntarie motion of the same is hindered.

Tho. Gale. And this luxation is either perfect, as when the bones are quite diuided and put asunder, or else it is an imperfect luxation, when the ioynt is but onelie wrested, and not all together dislocated, this the Grecians call Parartheema.

Iohn Yates. Howe many kindes of luxations are there?

Iohn Field. There be two kindes of luxations, a simple luxation, with which there is no difference ioyned: and a compound luxation, hauing one or more effects to it connected and complicated.

Iohn Yates. What effects be those which are ioyned with compound luxations, or rather to speake properlie, what effects do make the luxation compound?

Tho. Gale. The most common are these, a luxation with a fracture, a luxation with Phlegmon, a luxation with a wound, a luxation with dolour, a luxation with hardnesse, a luxation with flure, and so in like sort you may number other effects, as they are with the luxation connected.

Iohn Yates. You haue nowe finished your talke touching the definitions and differences of tumours against

nature, wounds, vlcers, fractures, and last, of luxations, and among the rest you make three of them to be solutions of continuitie, that is to saie, wounds, vlcers, and fractures: I praie you answere me, be there no more kindes of solution of continuitie than these?

Iohn Field. There is no solution of continuitie, but is comprehended vnder one of these three, as you may perceiue by the differences of solution of vnitie, set out in the fourth booke of Galens Therapeutike methode.

Iohn Yates. I praie you rehearse those differences.

Iohn Field. There is a solution of continuitie left in the fleshie part after a wound called Thrauma. There is a solution called Helcos, whereas there is an vlcer in the flesh, there is solution of vnitie in the bone named Catagma. Also Spasma is a solution of continuitie in the nerue by conuulsion or distension. Apospasma is likewise in the ligaments. Rhegma is a rupture of the flesh. There is also a solution of continuitie called contusion, in Greeke, Thlasma, as is properly in the vessells. These are the principall kindes of solution. But now seeing we haue plainlie made discourse of all such sicknesse, as fall vnder that portion of the curatiue parte, which is called Chirurgerie, whereby you are taught to applie contrarie remedies, for the expelling of the forenamed griefes: it is requisite to vnderstand the operations which a Chirurgion must vse in obtaining his desired scope: I meane in restoring health to his patient.

Io. Yates. I praie you then let me learne what those operations are?

Iohn Field. They be in number three. First, to diuide or separate the continuitie. Secondlie, to vnite and ioyne together, that is diuided and separated, and last of all, to take awaie that is superfluous.

Tho. Gale. And we diuide the continuitie by making incision, letting of bloud, and scarification, whereas neede requireth, as also we vnite and ioyne together that is diuided, when as we consolidate & conglutinate wounds, when as we heale fractured bones, causing Callus to grow out of ꝑ fracture, and when we repose and put bones luxated and

dislocated

dislocated into the native and wonted seate. Last of all we doe take awaie that which is superfluous, when as wee take awaie tumors against nature, as Ganglia, Cancers, Nodes, Strumas, & warts, called Achrocordonas, also taking the water out of the bodies of those which haue a dropsie, or taking awaie the first finger or toe of the hand or foote.

Iohn Yates. All this I will keepe well in memorie.

Iohn Field. The Chirurgion must also in these his operations obserue fiue things principallie. First, that he doth it safelie, and that without hurt and damage to the patient. Secondlie, that he doe not detract time, or let slip good occasions offered in working, but with such spæde as arte will suffer, let him finish his cure. Thirdlie, that he worke gentlie, curteouslie, & with so little paine to the patient as conuenientlie you may, and not roughlie, butcherlie, rudelie, and without a comlinesse. Fourthlie, that he be as frée from craft & deceit in all his workings, as the East is from the West. Fiftlie, that he taketh no cure in ỹ hand for lucrée or gaines sake onelie, but rather for an honest and competent reward, with a godlie affection to doe his diligence. Last of all, that he maketh no warrantise of such sicknesse as are incurable, as to cure a Cancer not vlcered, or Elephantiasis confirmed, but circumspectlie to consider what ỹ effect is, & promise no more than art can performe, and you shall do these thinges much the better, (yea without these you cannot anie thing profit your patient) if you vnderstand the maner and exact waies of stitching wounds, of making tents, splanes, stuphes, bolsters, and conuenient rollings, wherefore if the daie will thereto suffice, we will declare & make plaine these things vnto you, and so finish our talke of the institution of a Chirurgion.

Iohn Yates. I praie you let no time be herein lost, for loth I were to depart without the knowledge of them, & for that you first made mention of stitching, I praie you first begin with it.

Thomas Gale. Then you must well marke & diligentlie consider that there are three kindes & manners of stitching, taking names of their effects. The first is called con-

glutinatiue or incarnatiue: the second is named compressiue: the third is reseruatiues, of these we will orderlie intreate, and first touching incarnatiue stitching, note that the vse of it is in all grœne and fresh wounds made in the flesh, whose lips or sides cannot be conserued and kept together, onelie with rolling and ligature.

Iohn Yates. And may not this kinde of stitching be vsed also in olde wounds?

Tho. Gale. If you will vse it in olde wounds whose lips are hard and thicke, it behoueth you first to make scarification of skinne about, and so let bloud flow out, and then you may vse it, and note that there are fiue sundrie kindes of stitching incarnatiue.

Iohn Yates. Which are they?

Tho. Gale. I will set them out vnto you. The first kind is done with an euen, strong and soft, thrœd of silke, making the first stitch in the middest of the wound, then the second stitch in the middle space betwixt the first stitch and the one end of the wound, and the third stitch shall be like the second in the other side of the wound, and so euer betwixt two stitches in the middest, take another vntill the sides of the wound be aptlie and decentlie ioyned together. And you must also take hœde that your stitches bœ not thicke or thinne set. For if they bœ too thicke, you shall (as Celsus sayth) prouoke dolour and paine, and cause inflammation, and if they be too thinne and rare, then it cannot containe the sides of the wound together. The second kind of incarnatiue stitching is vsed in great wounds of the thighs and shoulders, and is in this manner. Ioyne the sides of the woundes together, and marke how many stitches it requireth, and for euerie stitch you must prouide a nœdle and a thrœd, and put a nœdle in the middest of the wound, and winde the thrœd round about the nœdle many and sundrie times, and the nœdle remaine still in the wounde vntill the consolidation of the same. You must in like sorte doe with the other stitches which are to bee made, according to the quantitie of the wound. The third kinde of incarnatiue stitching is done with quilles or rolles made

of stoupes, in the bignesse and forme of quilles being wri-thed, and made euen and smoth. And this waie of stiching is thus: You shall drawe the sides of the wound together, putting your nédle and thréd through both sides of the wound, and againe put the nédle backe againe through the same hole, and so leaue a loupe of the thréd behinde, into which you shall put one end of the quill, then drawe straight both endes of the wound together, and fasten them to the other end of the quill, and cut off the thréd, and let the quils so remaine vntill the wound be perfectlie healed. The fourth kinde is done by hookes, great or little, according to the bignesse of the wound, and the hookes must bée crooked, and bowed at both ends. You shall fasten an hooke on the one side of the wound, and drawe the other end toward the other side, in which you shall fasten the other hooke. This kinde requireth no violence, but onelie serueth whereas the wound will easilie come together. The fift and last kinde of stitching is with clothes thrée cornered, béeing of such bignesse, as may suffice for the hurt member. Which kind of stitching is verie conuenient in those woundes, whereas we will not haue the cicatrise to be séene, as in the face, and these clothes must bée wet in some viscous and glutinous liniment, and laie them to on either side of the wound, and when they bée dried, you shal make your stitches in the cloth conuenientlie and aptlie, and so ioyne the sides of the wound together, and these be the fiue kindes of incarnatiue stitching.

Iohn Yates. There be two things touching these stitchings that I must require of you. The one is, what manner a nédle we must vse in our stitching: the other, with what things we shall make our liniment, which must be extended on the linnen cloth vsed in the fift kinde of incarnatiue stitching.

Iohn Field. The Nédle must also bée long and small, béeing thrée square, the eye hollowed in, that the thréde maye the easilier followe. To the which Nédle there must bée likewise a Quill made hollowe, called in Latine Canula, this serueth to holde the

sides of the wound together steadfastlie while you make your stitching. As touching the matter whereof you shall make your liniment, it consisteth on Mirre, Frankensence, Sanguinis draconis, Mastike, Sarcotolie, Pitch, Mildust, all these, or part of them, must be mixed with the white of an egge, and so extended on the clothes.

Iohn Yates. This I understand right well, wherefore procéede to the second kinde of stitching, which you call compressiue.

Tho. Gale. That stitching which we call compressiue vsed to staie and stanch great flure of bloud, is in this sort: Fold in the sides of the wounds, as the skinners vse in sowing their skinnes, and stitch them, ouercasting them. And we vse this also in wounds of the intestines, and panicles wounded. But this kind of stitching, in my opinion, is not so good and safe, for that if one stitch breake, all the other are losened.

Iohn Yates. Then I praie you procéede to the third kind of stitching, called Reseruatiue.

Iohn Field. This last kinde serueth onelie to kéepe the sides of the wound together vntill it be made whole, and is in like forme as other common stitchings, sauing ý the sides are not so straight drawen together, as in other wounds, & is right good in woundes ruptured and torne, and whereas things are afterward to bée taken out, and when as the wound must be purged, and this shall suffice touching the knowledge of stitching. There bée other inuentions and waies of stitching, which are to be learned rather by séeing the cunning Chirurgion worke, than by many lines set out in bookes.

Iohn Yates. Then I praie you procéede to liniments and tents.

Iohn Field. Tents & liniments to be profitable, no man séene in Chirurgerie doubteth, but at this present it shall be sufficient to shew when, how, & to what ends, they be vsed: & also of what matter they are made, & of their diuers formes.

Iohn Yates. I praie you vnto how many ends doeth it serue?

Iohn Fielde. Vnto.viij.sundry vses.

Iohn Yates. Which are they?

Iohn Fielde. First we vse tentes to enlarge & ampliate a wound, or to mundifie the same, and whereas mattier and sanies, is to be taken out of deepe wounds. Secondly, we are constrained to vse tentes in profound and deepe woũds, which of necessitie require a newe regendring of flesh. Thirdly, in wounds which through the ayre are altered, & therefore are made filthie and sanious, and require mundification. Fourthly, we must vse them in contused wounds. Fiftly, the vse of them is right profitable in woundes, that hath inflammation, or hath any tumor against nature ioyned with them. Sirtly, in woundes which come of biting: for such woundes are not spedely to bee conglutinated, but rather kept open: for that (if we beleue Cornelius Celsus) all byting dothe participate of venome, and therefore that must be drawen out, and not kept in through to hastie iccatrizing of the wound. Seuenthly, we occupie tentes & linements in those wounds, in curing of which we must hãdle the bones. Last of all, we vse tents in old woũds which are digenerated into ỹ nature of vlcers.

Iohn Yates. Seing you haue shewed to what endes tents serue: I pray you set out the mattier and substance whereof they doe consist.

Tho. Gale. For the better vnderstanding hereof, it behoueth to consider, for what cause & intention they are made: for sometime they be vsed to clense and purge the wound, & then they are made of soft and olde linnin cloth, sometime they are vsed to keepe the wound open and wyde, and then they are made of stupes cleane and well kempte, or else of cotton wolle. And for that cause also, there are tentes made of siluer or copper, being made hollow, and put into the wound. As for examples sake, in wounds of the nose, wherby he may both aptly drawe in the ayer, and also the woũd be purged of such filthinesse as groweth.

Furthermore, when as we will ampliate and enlarge a wound, than we make tentes of spunges, or the rote of the gentian, for these sucking the moisture in the wound doe

therewith swell and ware bigger, whereby the wound is inlarged. And as touching the forme and figure of tentes, they are made long, short, bygge, and little, according as necessitie require, but yet this is generall, that all tentes be made bygge at the one ende, & lesser euer toward the other: lesse, that they might slippe into deepe woundes. And these tentes are sometime dipped in vnguents, & sometime put into the wound or vlcer drye, according as occasion is offered, and this shall suffice, touching tentes, their vse, forme, and mattier on which they are made.

John Yates. Boulsters followeth nert.

John Field. Boulsters called pulvilli, or plumacioli, are much profitable and necessarie in woundes: for they compasse the member deuided, and norish, and conserue naturall heate, and kep the member from the waight and paine of the rollers: and in the olde time they vsed to sowe betwixt two cleane and white linnen clothes, feathers, and so made bolsters, which they vsed as is aforesaide. But for because they were compelled eftsones, and often to alter the boulsters, being wered through continuall making newe, they inuēted to make boulsters of sleepes, made with flare, sometime they make these bolsters of woll or cotton finely carded, and now it is in common vse to make boulsters of fine and soft linnen clothes thrise or more times doubled, as necessitie requireth. Also many doe make and ordaine boulsters of sponges: of these boulsters some be applyed wette, and some be vsed drye, & there be for the more part. vi. kinds of boulsters.

John Yates. Which are they?

Tho, Gale. Retentiue, conglutinatiue, expulsiue, restrictiue, cōfortatiue, & conseruatiue. These take their names of their vse & office, for those bolsters which be retentiue, serue in woūds, for to stanch blond, being but little & smal, & laied on a stupe or splegiant, mired with the white of an Egge, and some restrictiue medicine. The conglutinatiue bolster serueth to kepe ỹ sides of great wounds to gether, after that they be stitched, and the forme of these bolsters according to Auicen, is thrée cornered, & so adapted to the mēber ỹ one of

the corners of either bolster lye on the wound. The expulsiue bolster is ordained to put out matter or sanies in vlcers & woũds, which be deep & hollow, & these be made either of linnin cloth, or else of spunges. The restrictiue bolster is made of linnen clothes doubled ii. or iii. folde, dipt in wine or vineger, or other decoction, & so wrung out, & laide on either side the woũded part: & this doth restraine the flux of humours flowing to the part, & kepeth back inflãmation & other accidents, which might infest & greue the wek mẽber, & the vse of these bolsters is right profitable in fractured bones or lurations. The cõfortatiue bolsters serue to cõfort & strengthen the weake mẽber, & are diuersly made, some of fine linnen clothes, in which is sowed fethers, & this is made like a quilt, & serueth for the armes, or legges, to kæpe them warme, & norish natural heate. There be also some made of tow, which are accustomably vsed in wounds of the head. Other are made of spunges, dipped in some hot liquor, or oyle, & after wrung out and applied to the ioints, and colde parts.

The conseruatiue bolster serueth in lurations, to kæpe the member reduced to his natural forme, in the same state, as the shoulder bone being reduced to his wonted seate, we lay a bolster vnder the arme, or as they cõmonly say, in ẏ arme pit, & these be the most notable & vsuall kindes of bolsters vsed in the act of Chirurgerie.

John Yates. If you in like maner make plaine vnto me the maner of ligature and rollings, I shall think my selfe satisfied for this present.

John Fielde. We will fulfill your request, and first following Auicen in his fourth fen. of his fourth booke, we make three sundry sortes of ligature or rolling, that is to saye, incarnatiue, expulsiue, and retentiue: the incarnatiue or rather conglutinatiue, is vsed in grene wounds, or fractures.

And the roller must be rolled vp on both ends of ẏ same, & the beginning of ẏ ligature must be on the contrary or opposite part of ẏ woonded place, winding the one part of the roller, towarde the higher part of the member, the other

toward

foward the lower part. The breadth of the roller must be such, as may couer all the wound, besides some parts of the sound flesh. The roller must be drawen straiter vppon the wound, then in the other partes: but yet not so straite, as may cause dolour or paine, inflamation, & flure of humors, and let the endes of ỳ roller be stitched and sowed, and not tyed on a knot.

The second sort of rolling, called expulsiue, is properly vsed in olde and hollow vlcers: & this doth expell the mattier, and filthinesse gathered in the bottome of the vlcer vnto the mouth and orifice of the same. This is with a roller, beginning at the lower part of the affected member, and so making the ligature straight, and so procede to the vpper part of the member, making your rolling lesser, vntill you come to the orifice of the vlcer.

Iohn Yates. Be not offended I pray you, though I seeme to breake of your talke, and before you procede further, let me vnderstand what you call the higher part of a member.

Iohn Field. I call (with Galen) the higher part of a mẽber, that which is most neere the liuer or heart.

Io. Yates. Then I pray you returne to your former talke.

Iohn Field. There ye remaineth to speake of the third kinde of ligature, which is called Retentiue, and this onely doth serue to kẽp on medicines on the wound, vlcer, or part affected, and in Apostumes, and other ill disposittions, and this is done with one onelie roller, beginning first on the part affected, and so procæde according to vse, fastning the roller with stitching, and this kinde of ligature must bee done softlie, gentlie, not to hard or straight, but without dolour or paine, and must be loked when necessitie doth require, and if that it fortuneth the roller to cleaue fast to the medecine or member, take it not awaie with violence, but wet it so long with Wine made warme, vntill it will of the one accord lose, and be taken awaie without griefe or paine, and note that your roller be made of fine and softe linnen clothes, not to much woorne, and vnable to holde, let it be also of that length and breadth that the part affected doth require, as for example: Rollers for the thigh must bee

fiue fingers in latitude, for the arme three fingers broade, for the finger the roller being a finger broade, shall suffice. As touching the longitude or length of ỹ roller, it is to be made as necessitie require, and occasion is offered.

Tho. Gale. Well then, seing that we haue ended this talke of stitching, tentes, boulsters, stupes, and rollinges, we will here conclude for this present: for behold the Sunne drayweth farre west, and the time will scarse suffice for our iourney homeward, and what you here doe want, you shall finde in other of my workes, but in our going toward the citie, let me heare what you haue borne away of this daies talke.

Iohn Yates. I will repete in briefe wordes so much as I can remember.

1 First when as I met you in the morning, being in talke of Chirurgerie, you shewed me what it was, & gaue me thereof diuers definitions.

2 Secondly, you proued it to be the third part Therapeutike, and shewed the antiquitie and worthinesse of the same, with certaine noble princes and captaines, who exercised Chirurgerie.

3 Then you laide that Chirurgerie did consist of two parts, the one being called ỹ theorike, the other the practise.

4 After that you declared what was subiectum Chirurgiæ, the thing on which the Chirurgion doth exercise his arte, and also what was the ende of Chirurgerie.

5 Further you set out what maner of parson he should be that must learne the arte of Chirurgerie, and what condicions are in him required, and what the cause was that there is so many rude Emperikes and vnskilfull professours of Chirurgerie.

6 Consequently, you did make mencion of the chiefe & most necessary instrumẽts, wherewith a Chirurgion ought to be furnished, both metalline and medicinall, with their proper office and vse.

7 Then you set out the methode and way to be obserued in learning the art of Chirurgerie and of the right vse

of

of instruments both mettalline and medicinall.

8 Next followeth such sickneſſe as fall vnder the hãdes of the Chirurgian, that is to saye, tumors against nature, wounds, vlcers, fractures, and luxations, with the definitions diuisions, differences, and diuers names of euerye of them.

9 After these things finished, you set out certaine kinds of solution of continuitie, taken out of Galen.

10 Also you set out the operations of the Chirurgion, which are required in curing the forenamed griefes, & what things are herein to be obserued or fled.

11 Finally, you set out the art and maner of stitching, tentes, plumacies, stupes, boulsters, and rollings, with their differences, substaunce, figure, vse and cõmoditie, these seeme to be the argumentes of this dayes talke, except I be deceiued.

Tho. Gale. They be so in dede, and now beholde, we be come to the Citie. Wherefore we will now leaue of talke here, and you both shall this night take part of such cheere, as God hath sent mee, and let vs recreate our spirits, and be merrie, I pray you.

Iohn Field. I thank you heartely sir, and I reioyce that my brother Yates hath so firme and perfect a memorie, God send more such to follow Chirurgerie.

Iohn Yates. I thanke you both, for the great benefit I haue receiued at your hands, and God graunt me to spende many dayes in this sort.

AMEN.

AN ENCHIRIDION of Chirurgerie, conteining *the exact and perfect cure of wounds,*

Fractures, and dislocations: newly compiled and published by Thomas Gale, Maister in CHIRVRGERIE.

¶ RICHARD FERRIS SERGEANT Chirurgion vnto the Queenes most excellent Maiestie, vnto his louing friend Maister Gale, sendeth greting.

TWO things there be at this present which moueth me to addresse my letters to you maister Gale, of which the one is the auncient and famous arte of Chirurgerie, which was in times past not an art of it selfe, but one portion of the curatiue part of Phisicke, called Therapeutice: the other, is my natiue countrie. These two by your labours and paines, I trust shal receue no smal profit & gaine, and these make me to write my letters gratulatory vnto you. First that the art of Chirurgerie, who being now so decayed, whose fame so obscured, hir beautie eclipsed, and vtilitie of it diminished, shal by you be somwhat brought to hir wonted & pristinate state. For it is in far worse case now in this our furious and raging season (in which good artes are contemned, or else little estemed & had in price) then it was in the time of Mantuan the Poet, who exclameth in this wise,

Fama quidem manet, vtilitas antiqua recessit.

The Poet speaketh of Phisicke generally, waying the excellencie of it, & the great vtilitie that hath come to mankinde by it in the olde time, as the workes and volumes of the Greke wry-

writers do testifie and beare witnesse: and conferring further their testimonies with the poore fruits of it that did spring in his time, as one lamenting the decay of so noble a Science, and great gift of God to mankinde, sayd in effect.

Hir noble fame yet still remaine,
But few doth health by hir attaine.

He speaketh it in the way of comparision, that there did not so many by the benefit of Phisicke receiue their health as did in the olde tyme. But I leaue Phisicke, and will speake of Chirurgerie, both our professions. Surely, I dare bouldly affirme, that if Mantuan were now liuing, and did behold the state of Chirurgerie, he would not say that her fame did yet remaine, but rather that neither fame nor yet great vse remained: I had almost sayde that it was knowen but onely by name. And what be the causes that she is brought to this miserable estate? If I shal say that which I know, ther be two principal enimes. The one is the Chirurgiō himselfe, who neither knoweth nor yet laboureth to learne his arte, but being inflamed with the loue of turpe lucrum, rudely and blindly exerciseth his arte. The other enimie is the patiēt, who hath nede of Chirurgeries ayde. For he will haue in lyke estimation, a cobler, a Ioyner, a Minstraile, a Woman, yea, a Horseleach, that hee will an expert Chirurgian, yea, and reward them as well, if it be not better. The remedies for one of these mischiefes, you haue, I hope in time prouided. I meane in setting out your Enchiridion. For there shall those that in dede are licensed to exercise Chirurgerie, finde no small portion of this arte, compendiously and faithfully gathered together. Wherefore leauing other their authors in which many errours are hidden, I doe exhort them that both for the fame of Chirurgerie, which they ought to their vttermost to maintaine: and also for their owne gaine and profit, they wil not onely reade this Enchiridion: but read & read it againe, not leauing vntil they be made wel acquainted with the same. And if any places do remaine obscure and darke, they yet haue you the authour to resort vnto, who wil

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as gladlie, I am ſure, open the meaning of them, as hee hath willinglie for their gaine and profite compiled the ſame. As for the other enimie, I meane the ſicke patients, it dooth not much force, for they are enimies chiefflie to themſelues, when as they fall into the handes of ſuch rude and buſſardlie clouters. And although the patients beeing maimed and brought in perill of death by ſuch, doo exclaime againſt Chirurgerie & Chirurgions, yet if the Chirurgions themſelues ſtudie to be learned, and excell ſuch rude Emperikes, the ſlaunder ſhall returne to the authors therof againe. The ſecond cauſe of my writing, was for my natiue Countries ſake, that like as you haue laboured from the time that you were in my gouernance and teaching, to profit in the ſame, and haue now ſhewed an euident ſigne and token thereof in this your Enchiridion: ſo you will not ceaſe to continue in theſe your good enterpriſes, and your Countrie ſhall reward you with honeſt report and perpetuall fame. Thus I ceaſe to trouble you further, looking ſhortlie for the publiſhing of this and other your workes. At my houſe in Paddington the ſecond of Iulie. 1563.

CHirurgerie, whoſe perfect light
all other Realmes doe know,
Whoſe learned men with diligence,
dooth make it ſhine and ſhow.

In our coaſt hath not yet appeard,
ſaue in moſt obſcure wiſe,
Thorough duskie cloudes of ignorance,
that ſcience doth deſpiſe.

But maugre now the malice great,
of Momus and his ſect,
A moſt cleere Gale doth blow awaie
thoſe cloudes, and them detect.

As after rude and cloudie aire,
the welkine hiecinthe bliew,
Is ſometime ſeene, when windes moſt drie,
haue chaunged ſo the hiew.

Therefore to this excellent Gale,
ſee that you thankfullie,
Giue condigne praiſe, and praie that he
may moe ſuch blaſts applie.

That the armade of learned ſhips
belonging to this art,
May waigh the ankers, ſpread the ſailes,
and from rough ſeas depart

While this Gale blowes, that ſome of them,
ariue may at our porte,
That to the fleete of knowledge once,
young learners may reſort.

Purchaſing there with diligence
ſcience that will remaine:
Leauing a part vile ignorance
the mother of diſdaine.

Iohn Hall Chirurgion.

¶ THOMAS GALE CHIRVRGION,

vnto the young men of his Companie, ſtudients in the noble art of Chirurgerie, wiſheth the grace of God, perfect knowledge in their Art, and moſt happie & proſperous ſucceſſe in the ſame.

WHen as I had for your ſakes (déere brethren) finiſhed my booke, intituled, The Inſtitution of a Chirurgion, and thought to haue procéeded no further touching the practike parte, but minding to ſend you to Guido de Cauliaco, Brunus, Lanfranke, Vigo, or ſome other of our authors in Chirurgerie, which doe thereof intreate: I could finde no one that might aunſwere my deſire, for eyther they writ in the tongue which the moſt of you vnderſtand not, either vſe they corrupt and barbarous names of ſickneſſe and medicines, or they be to tedious & long, or elſe to conciſe and briefe. Furthermore, they welnigh all are ſo full of errours, that they are onelie for the learned to reade, who can diſcerne betwixt truth and falſeneſſe. Wherefore knowing your deſire to learne, and ſéeing the want of ſuch Authors as you ſhould profit by, I lamenting the caſe, and tendering your wealth, haue taken the pains to compile you this briefe Treatiſe, called an Enchiridion, in which you ſhall finde the methode and waie how to cure all woundes both in ſimiler and inſtrumentall parts. Alſo how to vnite and heale fractured members, and to reduce & repoſe againe into their wonted and naturall place, ſuch bones as be diſlocated. Diuerſe ſecret and perfect experiments I haue made open vnto you, wherefore be bolde to worke after the doctrine ſet out in this Booke, and take theſe my labours as a pledge of my good will toward you all, and loue mée ſtill as you haue begun. At my houſe in London the ſecond of Auguſt.

1563.

The first booke of the En-

chiridion of Chirurgerie, containing the exact and perfect cure of wounds made in the similer parts. By Thomas Gale.

The first Booke.

FOrasmuch as in this present treatise (which I do compile for the instruction of those that professe Chirurgerie) I do purpose to intreat orderlie of wounds, fractures, and dislocations: I thinke good first of all to set out what a wound is, & how many differences there be of wounds. Howbeit my principall scope tendeth rather to teach the practise than the Theorike at this present. Therfore a wound is named a solution of continuitie, newlie made in the softer parts of the bodie, without putrefaction, corruption, or matter. For if anie matter, putrefaction, or corruption, followeth, thē it is no more called a wound, but an vlcer. Of wounds I do make two differences, for eyther it happeneth in the similer parts, as in flesh, arterie, veine, nerue, bone, &c. or else in organike or instrumentall parts. Of these two sortes of wounds we will now severally intreate. And for because the least and smallest wounds require least labour, diligence, and cunning, and that the studient must in most easiest things be first exercised and trained vp, I will shew you briefflie the cure of a simple & small wound, where the skin onely is diuided or cut. You shall aptlie ioyne the lips or sides of the wound together so euen as possible you can, then make a stufe with Towe and the white of an egge, mired with a little salt, and apply it to the wound, then roll and binde it according to arte, and this is sufficient in such kind of wounds. You must also command the patient that he exercise not the wounded member, least that he causeth accidents to fall to the wound, as inflammation, flure of humors, dolour and paine, &c.

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The cure of great and deepe wounds, and of diuerse kindes of Stitching. Chap. 2.

IF the wound be great in the flesh, and yet without accidents, you shall begin your cure in the Chapter before, that is, by compressing and ioyning the sides of the wound together, and then rolling and binding it. But if the wound be bigge, wide, or else ouerthwart the member, so that rolling and binding are not sufficient, then you are compelled to vse stitching, of which there be diuerse sortes, and I will set out those which are most in vse. But or you goe about the stitching of the wound, giue diligent héede that it bée mundified and made cleane, that there remaine not in it either anie vncleanneſſe, as haire, dust, oyle, or such lyke, which may hinder the agglutination of ꝯ wound. You must for your stitching prepare a thrée square nédle made hollowe in the eie, that the thrēd may the easier follow, and let your thrēd be euen, without knots, well twined and waxed. Then your stitching shall be in this sort. Make you first stitch in the middest of the wound, then a finger breadth frō ꝯ make another on both sides of ꝯ middle stitch, & so leauing the space of a finger breadth, make so many stitches as the wound requireth. And take this for a generall rule, that you neuer begin your stitching at the end of a wound, because through that occasion the wound might be drawen awrie, and the member lose his beautie, and sometime part of his office, and beginning your stitches in the middest, this followeth of necessitie that your stitches shall be odde, if there be more or lesse than twaine. And if the wound bée déepe & ouerthwart the member, then you must make your stitches déeper, and that for two causes, the one, for that it should not breake out againe, the other, ꝯ the wound might haue lesse matter, and better take consolidation. And when you haue thus stitched ꝯ wound, you must ouercast ꝯ thrēd twice or thrice or you knit your knot, otherwise it will break out or you can knit your knot, ꝯ prooſe of which I haue seene among the vnlearned Chirurgions. And when your wound is thus stitched, then take Tow & make a stufe with

the white of an egge, and this pouder following, and lay it on the wound, and though it hath not bene vsed before this time, yet it is both better and more conuenient than that which is mentioned in the last Chapter, and this is the first kinde of stitching.

The description of the pouder. Rec. Olibani. p.ij. Sanguis draconis. p.j. Calcis ex ouorum testis, p.iij. Ex his fiat puluis subtiss. secundum artem.

The second kinde of stitching, is to sowe ouer the hand, as the skinners doe, which is vsed in wounds of the intestines, or whereas Siphach is sowed to Virach. The third kinde is to put the nædle through both ỹ lips of the wound, letting it so still to remaine, and wind the thræd fire or seuen times about the nædle, and this is vsed in wide & large woundes. The fourth manner of stitching is, when as a veine or arterie is cut, and we vse to stale the flure of bloud, especiallie whẽ as Vene iugularis is cut. Then we thrust ỹ nædle through that veine or arterie, and then knit the same with the thræd, then drawe out the nædle, and let a portion of the thræd hang out so long, vntill it falleth awaie. The fift sort of stitching, is vsed in woundes of the face, or delicate and tender bodies which are not able to sustaine the paine of stitching with the nædle. And the stitching is in this sort. Take little pæces of linnen cloth thræ square and spread them on this vnguent following, and laye on euerie side of the wounde the pæces of cloth euerie one from other an inch, and when as the clothes are dried well, then stitch them, and drawe them together, and vse the wound in all other points as is aforesayd.

The making of the vnguent. Rec. Dragaganti, Sang. draconis, Olibani, Mastiches, Sarcocollæ, ana, j. dragme, Pulueris volatilis molaris. iij. dragmes, Albuminis ouorum. q.s. ad incorporandum.

Of wounds in veines and arteries. Chap. 3.

When as it happeneth that the veines are cut & wounded, you must diligentlie marke whether they be Vena Capillaris (that is to saie) small veines like haire, or else

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anie of the greater veines. If they be the smal veines, it shal suffice to stitch the wound, & vse the pouder desiccatiue mentioned in the Chapter going before, with tow and the white of an egge. But if anie of the great veines be wounded, the the cure aforesaid is not sufficient. Wherefore you may attempt to stay the flure of bloud with binding the contrarie side to the place wounded, or with letting of bloud in another place, whereby there is made diuersion of the flure. Also with frictions and rubbing the contrarie parts. If these suffice not, then you must applie caustike pouders, as Arsenicum sublimatum, Vitriall burnt, vnslaked lime, or such like, or else make cauterisation with an yron, or stitch the end of the veine, and lay some desiccatiue pouder on it, and so dresse the wound, letting it so remaine foure daies. And if there be anie asker, you must applie to it the white of an egge, and oile of Roses, well beaten together. And the cure that is here spoken of veines, is also to be vnderstood of arteries, and the waie to know whether a veine or arterie is wounded, is by the issuing out of the bloud. For in an arterie cut, the bloud commeth leaping and springing out with some stay, according to the dilatation & cõpressiõ of ỹ arterie. A pouder desiccatiue. Rec. Olibani, ℥.ij. Aloes hepaticæ. ℥.j. Pilorum leporis minutim confciso, Albuminis ouorum ad incorporandum. Lanfranke giueth great praise to this medicine, and maketh mention of a child three yeres old, bearing a knife in his hand, fell on it, and wounded his throate, so that through flure of bloud the pulse began to cease, and the childes sight to decay. Lanfranke comming by, layd his finger on the mouth of the wound to staye the flure of bloud, then he tempered the pouder with the white of an egge, and laide it to the wound, letting it so remaine foure daies, and when he would haue taken it away, it was so drie, and cleaued so fast to, that it might not be remoued without paine, wherefore he applied the white of an egge & oyle of Roses beaten together to the place vntil the nert daie, & the wound was found perfectly healed, to the great admiration of the people which did behold it. Another desiccatiue pouder. Rec. Calcis viuæ, Sang. draconis, Aloes hepatice, Fiat puluis, ana ℥. ℔

But if you will haue another, which dryeth and restraineth more, vse this following. Rec. Gallarū, Sangui. draconis, Boli armeni, Thuris, Aloes hepaticæ, Mastiches, ana. ij. dragmes, Pilorum leporis, iij. dragmes, fiat puluis crassus. Rogerius and Iemerius vsed another pouder, which is not onelie excellent in staying the flure of bloud, but also doth exicate and drie, whose composition is in this manner following. Rec. Colophonij. vj. ounces. Boli armeni. iij. ounces. Mastiches, Sang. draconis, Olibani, ana. j. ounce. Radicis consolide maioris, Rosatum persicarum, ana. ℥. j. Fiat ex hijs omnibus puluis. Vsus vt supra. Brunswicke remēbreth a stone which hée calleth a Bloud-stone, (but yet not that which are named Iaspis, and Hematites) and it is in coulour pale, whitish, with small redde veines, and is found in Spaine, whose Pouder hée preferreth before all other thinges in staying the flure of bloud in woundes, veines, and arteries.

Of the Wounds in Nerues or Sinnowes. Chap. 4.

IN a wound it maye happen the Nerue to bée diuided in length, and sometime ouerthwart, which is verie perilous. Also sometime the Nerue is pricked with a nædle, bodkin, alle, thorne, or such like. Unto all this, to cease the dolour and paine of so sensible a parte, you shall vse Oyle of Roses, made with Oleum omphacinum, somewhat warmer than the patient can well suffer. Also you may make a good digestiue of fine Turpentine well washed in the waters of Plantaine or Hypericon, and applie it to the wound. And if these with often application ceaseth not the dolour and paine, then take Olei Rosacei, two ounces, Boli armeni, two drammes, and Opij a little, mixe these together, and applie it warme to the wound. And when the paine is ceased, and the wound draweth to maturation, then you maye heale it with the drinke & plaister vsed in grœne woundes, which you shall finde in the Antidotarie. You shall also not onelie in wounded nerues, but also in all other woundes vse Vnguentum de vermibus, whose composition is in this manner.

Rec.

R. Centaurij minoris, Cynogloſsi, Cõſolidæ minoris, Conſolidæ mediæ, Ana, m.i. Olei omphacini, lib.i. Lumbricorum tereſt. Vini albi, ana, halfe a pound. Stampe all theſe together, and let them ſtand infuſed ſeauen daies, then ſtampe them with that. Seui Oiuini, lib.ij. Picis, Reſinæ, ana, ℥.iij. Ammoniaci, Galbani, Opoponacis in aceto ſoluti, ana, ℥.v. Boile all theſe together vntill the Wine and vineger bee conſumed, then ſtraine it, and when it begins to ware cold adde to it, Thuris, Maſtiches, Sarcacollæ, ana, ℥.iij. Croci, ℥.ij. Theſe being made in fine pouder, in the putting them in, ſturre them well with a ſplatter or ſliſe that they grow not into clods and lumps. Alſo to defend the wound of ſinnowes, yea, and all other wounds from accidents which do commonlie chaunce, all excellent Chirurgions vſe to haue in readineſſe this defenſiue following.

A defenſiue.

Rec. Olei roſarum, ij. ounces, Boli armeni, Terræ Sigillatæ, Aceti, ana, j. ounce. Camphoræ, j. dragme. Solani, Semperuiui, ana, m.j. Make of all theſe in a morter a perfect vnguent. And if the wound be moiſt, and hath too much ſuperfluous matter, whereby it cannot come to adglutination and cicatrization. Then vſe this medicine next enſuing. R. Mellis roſacei. ounces. vj. Farinæ Hordeaceæ, ounces. ij. Temper theſe together, and boile them, but ſuffer them not to burne, then put to it fine Turpentine (waſhed in the water of Hypericon) two ounces, mixe them and vſe it to the wound.

Of wounds in which are fixed thornes, ſplints of wood, arrow heads, Gunſhot, or ſuch like. Chap. v.

WHen as in woundes there happeneth to be fixed thornes, ſplints of woode, arrowe heades, gunſhot, or ſuch other like, & the orifice of the wound is ſo narrow, that with inſtrument it cannot be take̅ out, you muſt of neceſſitie labour to enlarge ẏ wound, which you may do two ſundrie waies. The one is with tentes, as of the rootes of Gencian, pith of Elder, or a peece of a Spunge; the other is to make inciſion with a paire of

tiers or with theres. There be also when as the wound is enlarged diuers and proper instruments to take out with such things as are there infixed, as tonges, or nippers, and teribillis.

Also you shall know in deepe woũds what part is hurt, by these signes following. As the braine being wounded he shall voide scomme and come at the mouth. If the heart be wounded, there issueth out bloud blacke in coulour. Also, if the lungs be wounded, the bloud is like a scomme. But if the stomacke be perced, the meate indigested commeth out. In like manner the intestines being wounded, the odour issueth. Furthermore, the vrine floweth out in wounds of the bladder: and so by that which is conteined in the member, you shall conjecture the wounded part. Now as touching the taking out of such things as be fired in the woũded mẽber, you may procede principally three sũdry waies. First you may vse such instruments before set out as shall seeme most necessarie. Secondly, if the thing fired be forkid as a broad arrow head or such lyke, and be perced through the greater part of the member: then it shalbe much better to thrust it through the member then to take it out at the orifice of the wound.

Last of all, if these two wayes will not serue, because of the woũded place, then as much as you can make the woũd wider by tents or incision, and laye maturatiues to it certaine dayes, and then that which is contained in the woũd, will with lesse difficultie come forth. You shall commaunde the pacient to lay on the wounded side, bicause the drincke which I vse in such wounds may the more redely come to the woudded part. The composition of this drinke you shal finde in the Antidotarie. Also you may vse this plaister following to ỹ wound which is right good in extraction of such things as are fired on wounds.

The emplaister. Rec. Apostolicõ descrip. Nicholai, iiii. vnces. Magnetis orientalis, ij. vnces. Polipodij. Dictami albi, ana, halfe an ounce. Pinguedinis leporinæ, ij. vnces. Olei canabis, i. vnce. Terebenthinæ, halfe an vnce.

Of all these make an emplaister. Also there is another com-

compolition of meruailous vertue, in drawing out rotten bones, thornes, and other lyke things.

Rec. Nucleorum palmularum, Stiracis rubei, Salis ammoniaci, Aristolochiæ longæ, Radi. Cucumer. Asinini. Teribinthinæ. Ana. v. drams. Piperis Albi, Piperis Nigri, Armoniaci, Amomi, Xylobalsami. Thuris masculi, Colophonij. Ana. ij. dragmes and a halfe, Fecum olei liliacei. q. s. Ceræ iiij. dragmes, fiat vnguentum.

But in arrow heads or shot poisoned the medicines rehearsed are not sufficiēt. Wherefore you must giue the patient some antidotum or Alexipharmacum, against venom both inwardly & outwardly, inwardly you shall giue him euery day this potion.

Rec. Vini cretici, Sublimatæ rutæ. Ana. vnces. iiij. Tormētillæ, Dictami. Ana. ij. dragmes. Theriacæ opt. i. dragme. Bulliant ad consumptionem tertiæ partis.

Outwarly into the wound you shal put oyle of violets warme, which oyle must be made of Line sæde oyle. You may also wet your tent in the same oyle and also myre it with your other medicines that you apply to the wound.

Of contusid, broysid, or crusshed, wounds. Cap. vj.

IN contusid wounds, the methode curatiue differeth frō that which hetherto is mencioned. For in these woūds first you shall apply maturatiues, whereby that which is bruised & seperated from the vnitie of the part, may be turned to mattier (they call it in latine sanies vel pus) & when it cōmeth to maturation, then you must vse mūdificatiues to mundifie the woūd, vntil it be cleane & voide of mattier. Thē your next intētion is to ingēder flesh, which you must do with incarnatiue medicines, & euer be diligēt to defēd ỹ contusid member from accidēts, with oyle of Roses warme applyed to the same. As touching maturatiues, mūdificatiues, & incarnatiues, you shal finde thē in my Antidotarie, and in diuers parts of this worke.

Of depe & hidden wounds, which cannot be well perceiued. Cap. vij.

In

In this kinde of woundes the cure is done two sundrie waies. First, if the place may suffer it without hurt of veines, arteries, and nerues, is to delate the wound with tents of Gentian, or of a Spunge, and after make it open and large with incision. The other is, if the first waie cannot be done without daunger, to put into the wounde a probe or ware candle, vntill you come to the end of the wound, and make there an issue, that by this waie the mattier in the wound may be cleansed with some mundificatiue lotion conueied into the wound by a siring. Let your rolling also be such, ỹ it be lose at the orifice of your wound, for otherwise you shall kæpe the mattier still in ỹ wound. Neither shall you in mundifieng the wound thrust out the mattier, for so doing you shall thrust out the indigest mattier in coulour of bloud, and hinder much the cure of the wound. As Brunswike maketh mention of a certaine Barbour who had no knowledge in Chirurgerie, ỹ yet would take vpon him to practise. This Barbour (hauing a patient wounded in the arme) did euerie date thrust out so much bloud, and brought such accidents to the part, that if Brunswike had not fortunatlie come, the Barbers patient hadde lost his arme. Such is the fruits of blinde Emperiks. You shall also aboue the wound applie some defensiue, and on the wound some mundificatiue, and make your iniections with a siring, vntill the water come forth of the same coulour it was put in. The water vsed for iniections is made in this manner.

Rec. Mellis rosacei. vj. ounces, Rosarum rubearum, Florum camomilli, ana. iij. ounces, Masticches, Ireos, ana. j. ounce, Thuris, halfe an ounce, Mirrhæ. j. dragme, Vini albi. ij. pound, Aquarum plantaginis vtriusque, Rosarum, Caprifolij, Foliorum quercus, ana, a pound.

Another more vehement. Rec. Aluminis, j. ounce, Balaustij, Nucum cupressi, Orobi, ana. j. dragme. A drying water. Rec. Consolidæ maioris. viij. ounces, Peucedani, iiij. ounces, Aluminis. ʒ. ij. Aquæ Fabrilis per filtrum destillatæ. iij. pound. Boile all vnto the consumption of the third part.

A Mundicatiue.

Rec.

Rec. Vnguenti Egyptiaci, ij. vnces, Aluminis, j. vnce, Olibani, halfe an vnce, Myrrhæ, j. dragme, Vini rubei, two pound, bulliant pulliant.

Of Wounds in the bones. Chap. 8.

THE solution of continuitie in the bone, is in diuerse sundrie wise, as fractures, splents, caries, & by wound, of which last we wil onelie in this Chap. make mention. If the bone wounded doth hang to the pannicle which inuelled and couereth the bone, then doe what you can to cause it to ioyne. But if this pannicle be also cut, then will not the wound be filled with flesh, except the pæces diuided be taken awaye. And to the wounded bone you shall vse Vnguentum aureum ex Mesues præscripto. After you must applie mundificatiues and consoladatiues set out in the Antidotarie, and se that you vse in this wound apt ligature, and that it be open vpon the wound, that you maye dailie applie medicines to the place without losing of the roller. Furthermore, you must lay about the wound some defensiatiue, whereby the part shall bee preserued from diuerse and sundrie accidents which might fall to the wound. The Chirurgion must also haue regard that the Patient keepe a moderate diet, & that he be soluble in bodie. Which if it cannot be by nature, then procure it may be done by arte, as by Purgation, Clister, or suppositorie. And in all other things the cure of this wound differeth not from the cure of other wounds.

Of a new kinde of curing greene and fresh wounds with balme. Chap. 9.

THE healing of græne wounds by balme artificiall is in this wise. Close the wound, & stitch it, make it cleane with a drie spunge, & put of the balme into the wound verie hot, and dresse it twice euerie daie. And heare you must note that this balme taketh not like effect in all græne wounds. For the cure differeth according to the Countrie, complection,

Thomas Gale vnto the

friendlie Reader, Salutations.

MY friendlie and welbeloued brethren, when I did consider with my selfe the great defect and imbecilitie which doth remain amongst our Companie, for lacke of learning in the speculatiue part, of this worthie art of Chirurgerie, which chieflie doth appertaine vnto the same. And considering with my selfe what great ignorance and infamie hath growen to our Companie thereby, I haue not bene a little carefull to remoue the same thinges from vs. And considering with my selfe also, that these things cannot be remoued but by knowledge, and that knowledge cannot come, but by reading and hearing, and reading is vnprofitable, except it be vnderstood. Therefore I haue with great diligence collected and gathered together these foure bookes of Galen, called Therapeuticon, & being trāslated into the English tongue, I haue dedicated the same vnto you, to that end, that you may with the like diligēce & studie, receiue pleasure, profit, & great commoditie, by these bookes which I heere deliuer vnto you with painfull trauaile, great cares, & charges: But when I did consider these diuine & most excellent bookes, how profitable & cōmodious the same should be vnto you, I saie, not onelie to you, but to the whole common wealth of our Countrie, & what great honor shuld grow vnto mine owne natural Country men hereby, & also what furtherance & increase of knowledge it shal be vnto those that professe this art. I neither regarded monie nor profit, nor passed for anie paines, but yeelded my carefull studie to serue your turne, in this most diuine worke. And moreouer, I thought it my bounden dutie, to helpe to raise vp that most famous mā Galen, who hath lien so long buried with that foule monster Obliuion, from the knowledge of our natural tongue, so that worthelie he hath deserued immortall fame. Now my brethren, there are three speciall points that are to be considered.

The

The first is, to whom you do minister, and to what end your ministration serueth. The second is, with what thinges you doe minister, and what methode you ought to keepe in the time of your ministration. The third is, what manner of knowledge ye ought to haue that will cure methodicallie and rightlie, by his ministration. To whom this Artist doth minister, it is easilie knowen, for he doth minister to mans body, which is subiect vnto the art of Medicine, and the end and affect of his ministration, is to cure mans bodie of such hurts and diseases, as the same bodie is anoyed and troubled with. The second doth consist in those things that you cure withall, and they be three, that is to saie, conuenient diet, or as wee may tearme it, conuenient gouernment of the sicke patient, and conuenient medicaments, apt and meete for the disease, and also an apt and conuenient person methodicallie & rightlie to vse these two. The third is, what manner of knowledge this person ought to haue. Galen doth verie well describe his knowledge in these bookes, against that foolish bragging Thesalus, how he would take vpon him in sixe moneths, to make a man perfect in this arte, and yet he himselfe but a Woolman, or as we may tearme him, a Spinner and carder of wooll, whose foolish stupiditie was such, that he would compare with Hyppocrates and Galen, and therfore Galen hath written against him in all these bookes, not onelie condemning him, but condemning all other ignorant persons, which vnderstand not the principles of this arte, and speciallie other Artists, as Carpenters, Smiths, Cookes, Weauers, and women, which doth leaue their owne honest occupations, wherein they haue bene brought vp, and dooth arrogantlie and presumptuouslie take vpon them this most worthie arte, wherein they be vtterlie ignorant, and if they cure anie thing, it is by chaunce, and not by methode, as you may perceiue in his first booke.

There is also another thing to be noted, that Galen doth not make such diuisions betwixt wounds and vlcers, as wee commonlie doe, for hee dooth name all those that commeth with solution, or separation of the skinne. Elkos in Greeke, that is to saie, an vlcer.

But

And for bicause the soule is the most noble part of man, & hath his seate in the head, I wil beginne with the wounds of the head first, and set forth such things for the preseruation of this so principall a part, as my poore knowledge & experience will extend vnto. And here loke not ỹ I will waste time in rehearsing of weapons wherewith the part is hurt, as diuers do. For it helpeth nothing to the cure of the woũd to say he was hurt with a staffe, clubbe, sword, shotte, fall, or such like: but rather to loke to the wound it selfe, whether it be a simple wound, or that it be compound: whether it be confused, or else but cut: and so following the differences set out in the first booke.

Of certaine generall precepts, necessary to be followed in the cure of woundes of the head. Cap. I.

WOunds in the head are diuers & sundry, some are but simple woundes, being cut without any accidents or hurt of Cranium, some be with cutting also of Cranium. Some be confused, and yet Cranium perfect, other happeneth with the breaking of Cranium, some are with perishing of Dura, vel Pia mater, and losse of some substance of the braine, & others are without. But for that I would you should know whether the Cranium be fractured or not, I will giue you certaine proper precepts. If the contusion be great, if he fall from any high place, or haue a great stroke, if when he reteineth his breath, there commeth out moistnesse through the diuision or fracture of the bone, also vomiting, vertigo, bleeding at the nose or eares, the eies red and swolne, want of speech, a sharpe feuer, and difficultie of making his vrine: al these shew Cranium to be fractured.

There is also another note to know Cranium fractured, and that is, to strike on Cranium yncke or Mastticke, and if there be any fracture, then in the place there will appere blacknesse, which is a most certaine token that the Cranium is fractured. Also in your prognosticatiõ you must consider

sider these briefe sentences. Great breaking of Cranium is perillous, and the wound in the braine, or corruption of the Dura, vel Pia mater, is deadlie and mortall. If the blacknes of Dura mater when it happeneth, cannot be taken awaie with Mel rosaceum, it is a token of death. Also the Craniū or braine, wounded at such time as the Mone is at the ful, (that is, when she is in opposition of the Sunne) it is verie perillous. And in curing the wound, if there be a tumor or swelling, & that same sodeinly vanish, it is perillous. But in the consolidation of Craniū, if the flesh appeareth red, it is a good signe. Like as if in ỹ wound there be good digestion & no accidents cōming to the same. And for because in curing ỹ wounds of the head there is diuersitie in working, & diuerse opinions, I thinke it good to set out certain documēts which I take out of the famous Guido, whose words are these following. First (saith he) the wounds of the head with breaking of the bone haue much difference from the woundes of the other members, both for the nerues to Cerebalis Medullæ, so noble a part, & also for the round & spherelike figure & forme of the head, which hindereth vnition, & is vnapt for ligature & rolling. Secondly, ỹ in great wounds of ỹ head it is nædful for to obserue the cōmon intentions mentioned before in the treatise of Phlebotomie, & purging. That ỹ bodie be soluble, which if naturally it chanceth not, thē by suppositorie clister or gentle lenitiue, you must make it lose. Also the diet thin, &c. Thirdly, ỹ in wounds of the head ỹ haire be shauen, & take hæd that no haire, oyle, or water, fall into the wound, which may let consolidation of the wound, & that to resist dolour both aboue & vnder, applie the white of an egge. And after the beginning, let things be vsed as is afore-said, to mundifie and incarnate. And round about ỹ wound alwayes vse the vnguent with bole armoniacke and oyle of roses, that the dolour and distemperaunce of the part bee all waged, and all apostumation put back. Fourthly, as you haue often heard of Hyppocrates, that all coldnesse is hurtfull to nerues, bones, and marrowe, and also the aire doth hurt & alter the principall members. And therfore in winter when ỹ patient is dressed, let the windowes be close shut, & a Tract. 3. Doct. 3. Cap. 1.

good fire of coales, and dresse him with a candle, and when he is dressed, put on his head a coife or cap made of a sheeps skin. Fiftly, if the wound be come to digestion, & hath mattier contained in it, ỳ it be remoued away with fine lint or cottõ, so softly as may be, & this in winter must be but once, & in Summer twice. Sixtly, ỳ vpon the tents there be laide a soft spunge to sucke & draw, & receiue out the mattier, that it falleth not to the braine. Seuenthly, ỳ you haue a roll a yard long, & foure fingers bread, & that you shall roll it vp within two handfuls of the end, & begin the ligature at the forehead, & extend it towards the eares oppolite to ỳ wound, & the other part to the eare next the wound, leauing ỳ eares vncouered, and let the roller come downward to ỳ first binding, & doe it so many times vntill the head be couered, &c. Eightly, take hede if there remaine anie scale of a bone, wash the wound with wine. If there be no feauer giue him this pouder following. Rec. Pinpenellæ, Betonice, Gariophillatæ, Valeriane, Osmundæ, ana, Piloselle, quantum de omnib. fiat puluis.

Last of al, that the patient lie on the side which least grieueth him, vntill there be found mattier in the wound, and then he must rest on the wounded part, that ỳ mattier may the more readilie voide. Thus much in effect touching Guido his counsaile. Also I wish frõ the first beginning of the wound, vntill such time as there is no feare of Apostumation, that you vse some mittigatiue, as oyle of roses three ounces, honie, one dram, mire them together, and then you may also vse this pouder, which drieth without corrosion or pricking. Rec. Irios, j. dram, Thuris, Aristolochiæ rot, ana. ℥.ij. Corticum radicum papaueris, halfe a dram, Sarcocollæ, Sang. draconis, Mirtillorum, Nucũ cupressi, ana, ℥.i.℈. Make these in pouder. Thus much I thought good to write before I entered the perticular cure of organike woundes, being as guides and counsailours to be followed through this whole booke. Now will I begin and shew their methodicall cure.

Of simple wounds in the head with cutting, which happeneth without hurt of Cranium. Chap. 2.

If

IF the wound be simple without hurt of Cranū, or losse of substance, then is the cure of it like the cure of other wounds, to stitch, roll, incarnate, and cicatrise. But if the wound be with the losse of substance, thē you must dip your tents and couer your plegeants with incarnatiues, and cicatrise the wound with your accustomed powders, vnguēts, emplaisters, and other things thereto belonging. As touching stitching in the head, because many speake against it, I affirme it to be not onelie profitable in small woundes, but also in great most necessarie, for it kæpeth the parts separated together, which rolling cannot. It also causeth that the aire doth not alter the part, which where it chanceth, it is verie hurtful. And here I except great wounds in ẏ fore part of ẏ head, which may not be stitched but on the side, & putting in it oile of roses, which doth both take awaie the paine of ẏ neruous pannicle inuesting and couering Cranium, if the wound be so dæpe, and also it maketh the bones more easie to be drawen out, and taketh awaie the sharpnesse of Mel, when with it we intend to mundifie anie inward pannicle, and defendeth from accidents.

Of wounds in the head with cutting and fracturing, or breaking of Cranium, but not through pearcing. Chap. 3.

THe wounds chancing in the head by cutting and fracturing of Cranium, going not through the whole substance of the same, is called Rimula. This wound either is great or small, if it be small, it shall haue the same cure mentioned in the Chapter next going before this. For in such a wound there is small generation of mattier, and that engendered through his grose substance, cannot descend in ẏ cut or rift. But if the wound be great, then is it either in ẏ sides of ẏ head or vpper part of the head: if it be in ẏ sides, it hath also ẏ same cure that ẏ wounds in ẏ Chap. going before receiueth, except that in the lower part of the wound there be put a tent wherby if any matter be retained in ẏ wound, it may the easier come out; but if the wound be in the vpper

part of the head, it may not be stitched, for that nature there cannot purge her selfe. If the fracture commeth to the middest of the two tables of Craniū, it is néedful to take chéres called Rugines, of diuerse bignesse. And as the bone of the patient is vncouered, you shall vse the greater Rugines, thē after take those that are narrower, and so at length the narrowest of all, and this shall you doe at all times in ỹ middest of the two Tables. Thus shall you spédelie cure this wound with dryng medicines and tents that shall sucke & drawe out the matter.

Of Wounds in the head in which Cranium is cut, vnto the inward pannicle, without losse of substance. Chap. 4.

This kind of woūd wil haue somtimes sparanks or sharp péces of bones, & some are frée frō them, & euen without sharp péces of bone. Those ỹ haue the sparanks do hurt & offend ỹ panicle which is called Dura mater. Therfore they must be taken awaie with a lenticular, and made smoth & euen, & then is the cure of this wound like the other wounds in the former Chapter. For if it be in the vpper part of the head, you shall vse to mundifie and desiccate without stitching, if it be in the sides, then in the lower part of the wound you must put a tent, as is aforesayd, that the matter may the easier come out.

Of Wounds in the head contused, without fracturing of Cranium. Chap. 5.

It is the proper scope of curing this wound to applie to it medicines that resist flure, and repell the matter backe, vsing in the beginning, after the accustmed manner, the white of an egge, mixed with oyle of Roses, and so resoluing the matter gathered, you shal vse honie and wine in which salt hath ben put. But if it come to maturation, then you shall open it, and vse the cure to it that is proper for Apostumes, and such medicines as are mentioned in the generall Chapter of contused wounds.

Of

Of wounds in the head with contusion, and where Cranium is little fractured. Chap. 6.

YOu must diligentlie loke whether in the place whereas Cranium is fractured, there are anie sharpe peces of bones, which if there be, they must be remoued with the lenticular, as is afore mentioned. Then you shall dresse the wound, & lay thereon soft silke, wet in honie of roses & oyle of Roses, and with your instrument you shall put in the linnen cloth betwixt Dura mater and Cranium, and laie on it soft tents wet in Melros. and oile of Roses, and applie thereon a linnen cloth wet in the same, and on the wound of the flesh put either drie lint or a soft Spunge, to lucke vp the mattier, and applie an head plaister, ỹ the mattier close not within. After which you shal in wine made hot, wet tow and presse out the wine with your hand, & lay that also on, then vpon that put drie tow, and roll it softlie, that ỹ things applied may abide on the wound. And when the wound is mundified, then leaue off the first cloth, and vse the head pouder to make the wound incarnate, & so with consolidatiues and medicines inducing a cicatrise, you shall procede vntill the wound be perfectlie cured.

Of Wounds contused with great fracture of Cranium. Chap. 7.

COntused wounds with great breaking of Craniũ, must be cured after this method. First you must shaue ỹ haire awaie, then with an incision knife you shal cut ỹ place crosse wise, or as other do vse, which is not so good after this manner. Then rase of the flesh, and make the fractured bone opẽ and bare. And if there followe anie flure of bloud, you must cleanse ỹ wound with linnen clothes dipt in water and vineger, or the white of an egge, and if there be no flure of bloud, fill the wound with drie lint, and dip clothes in oile and Wine, and applie it to the place, & binde vp the wound as thereto belongeth. Then if there followeth no accidents which may hinder the cure of the bone, open the wound & let

the patients eares be stopped with lint or cotten, y he heareth not, for making him faint hearted and afraid, & let two men stay his head with their handes, and then with your knife depart the bone, or with the lenticular. But if this cannot be done both spedely, and without great paine, then set a trappen, and bore it through so many times, vntill it be separated from Cranium, and you shall take awaie this bone fractured, first lifting it vp with an elevatorie, vntill you may take it awaie with your nippers or fingers. Then you must make the edges of the bone smoth and euen, and after cure it in all cases as you cure wounds where Cranium is fractured, with the taking out peces of bones.

Of Wounds in the face. Chap. 8.

WOunds in the face are either in the fleshie parts or not, if in the fleshie parts, the wound is either drie or moist. If in thy fleshie parte, and the wound moist, you must of force stitch it with a fine small round nedle and fine thred, but if it be in the fleshie part & drie, you shall in the place of a round nedle vse a square. If the wound be not in the fleshie part, then in anie case you must leaue off stitching, & in the place of it to ioyne the lips of the wound together, you shall doe in this manner. Take Sanguinis draconis calcis ex testis ouorum, Masticches, as much as is sufficient, make in pouder, and temper them with honie vntill it come to the substance of honie. Then prepare two linnen clothes according to the length of the wound, and spread of it vpon the clothes, and then vnto either side of the wound apply a cloth and suffer it to drie. Then with your nedle take your stitches on both clothes, and vnite and ioyne the sides of the wound so euen and right as may possible be, which things done, lay on the wound this pouder following. R. Sang draconis, j. dragme, Olibani, Cacis è testis ouorũ, ana. ℥. ii. Make these in fine pouder and temper them with the white of an egge, and lay it on tow, and applie it to the wound. After you shall heale it with the same plaisters, vnguents, pouders, or balme, as you customablie doe another wound.

Of

Of wounds in the eies. Chap. 9.

ALl wounds in the eies or about the eies are dangerous, both for the nerues of the braine, and also for perill and losse of sight, yea, it happeneth often ỹ through wounds about the eies the nerues optike haue bene stopped, & there haue also followed somtimes a catarack. What is then to be loked for, when as the wound happeneth in the substance of the eie? Galen maketh mention of one hurt in the white of the eies, and much moisture flowed out, and yet the patient restored to his sight. In like sort doth Brunswicke rehearse the like historie of two children wounded in the eie, & much moisture came forth, and he cured them with this water following. But these cures are De raro contingentibus. Rec. Aquarum fœniculi, Rosarum, Polij, Eufragiæ, Rutæ, ana halfe an vnce, Albuminum ouorum. q. s. These did he temper and mixe together, and applied it to the eie, as he affirmed, to the great comfort, and restoring of sight in the children aforesaid. But I will goe to the cure of wounds of the eyes, which is without perishing of sight. If anie be wounded through the vpper or neather part of the eie, so that it hang downe, then with a néedle being bent crooked, aptlie for the eie, and a silke threed wel waxed, you shall verie finely stitch it vp, that the tumour of the eie maye be the lesser. And put into the sight of the eie the water before mentioned, and make a plaister of the white of an egge, Sangui. draconis, and Frankensence, and laie it round about the eie, but beware ỹ it touch not the eie it selfe. Also you may heale it with balme, but be diligent ỹ none fall into the eie, & euer vse the water aforesayd, which is a wonderfull defensiue, and letteth accidents to come to the place, and thus shall you perfectlie cure the eie. And if the wound come with arrow head or sword, you shall proceede with oyle of roses, & if anie thing be fired in the wound, worke after the doctrine set out in that Chapter. And when the thing fired is out, fill the wound with oyle of Roses, tempered with the yolke of an egge warme, and mundifie the wound with Mel Rosarũ, farina Hordei, & Fenogręci, after applie incarnatiues, &

heale the wound with the plaister vsed in græne woundes. But if it be wounded with nædle or thorne, vse the mundificatiue and defensiue about the eie, and wash the eie with this Colyrium following, vntill he be healed. R. Boli armeni, vnce. ij. Thusie, Sangui. draconis, Gummi arabici, ana. ℥. j. Make these in pouder, and put it into a quart of good rose water, & set that glasse in warme water three houres. Then put to it Wine of Pomgranades, and let it remaine in the warme water (ỹ Alchimists cal it Balneum Mariæ) a whole daie, after straine it, and put of it morning and euening into the eie. Also put on it this plaister following. Rec. Succi Semperuiui, Solatri, ana. ℥. iiij. Boli armeni, Dragaganti, Myrrhæ, Gummi arabici, ana. iii. ℥. Make that is to be brought into pouder, and dissolue the gums in vineger, & make therof a plaister, & if through chaunce there falleth into the eies haire, dust, moates, or such like, open the eie, and milke into it the milke of a woman. Also it is verie good to vse this medicine plaister wise, as the other before mentioned. Rec. Aquarum solatri, Semperuiui, ana, ij. vnces, Tutiæ preparati, halfe a dram, Coralli rubei, Margaritar. non perforat, ana. ℈. j. Camphuræ, x. graines, Dragaganti, Gummi arabici, ana, viij. graines, Ceruſæ lotæ, v. graines, Lactis mulieris, Albuminis ouorum, ana. ij. drams. Mixe these together and vse it plaister wise, as is afore said.

Of wounds in the Eares and Lips. Chap. 10.

THere is nothing in these wounds proper to it selfe, but is cured as other græne wounds, that is to saie: First stitch it and lay thereon the pouder mentioned before, made of Frankensence, Sangui. draconis, and lime of eggeshels, &c. & about the place laie some defensiue, and the third daie apply oyle of roses and the yolkes of egges. After mundifie the wound wᵗ Mel rosarum, farina hordei, Turpentine, Sarcocoll, and Myrrhe. Then heale it vp with Balme, or the plaister vsed in græne woundes, regarding alwayes if næde require, to purge, let bloud, bore and scarifie.

Of woundes in the nose. Cap.xi.

THE Nose is sometime cut of, and sometime hangeth by the flesh of the lippes. If it be cut of, there is no cure to be vsed, for the organicke parts deuided, wil not receiue vnition and ioyning againe together. If it hang by the flesh of some other part, then stitch it aptly, and reduce the nose to his naturall forme. Then put into the nostrelles tents of wolle, or Gose quilles, that ẏ head may both purge it selfe the better, and also that he may the easier draw vp the ayre. And on the woũd it selfe, lay the pouder here-after following. Then lay thereon the white of an Egge w̃ tow tempered with some of the foresaid pouder, and after bynde and roule it, which thing that you may the easier and more aptly doe, let him put on his head a cappe or quaife, & sowe thereto your bande, and so may you procede in the curation of this wound, with the Balme or plaister, vsed in grene and fresh wounds. The pouder applied to the seame of the wound, is this.

Rec. Thuris, Calcis ex testis ouorum, Sangui. Draconis, ana. ij. dragmes. Myxe them with the white of an Egge tempered with oyle of Roses, the defensiue may be in this maner following.

Rec. Succi solatri, Semperuiui, ana. vj. vnce. Olei Rosacei, iiij. vnces. Boli armeni. ij. vnces. Aceti. j. vnce. misce.

An other defensiue. Rec. Vitellos ouorum. ij. Sang. draconis, Dragaganti, Gummi arabici, Boli armeni, ana. ij. dragmes. And if you would haue the skinne faire, then you may lay on it this vnguent following.

Rec. Thuris, Myrrhæ, ana. j. vnce. Farinæ fęnogręci. ij. vnc. Resinæ, vj. vnce. Lithargiri auri, halfe an vnce. Olei oliuarum, ij. pound. Ceræ. iiij. vnce. Myxe these, and make thereof an vnguent, and vse it, as necessitie shal require, and the discrete Chirurgion think conuenient.

Of woundes in the mouth. Chap. xij.

The

THE wound of the mouth hath nothing proper to it selfe, but is stitched, defended, mũdified, incarnated and cicatrized, after the maner of other græne wounds, therefore it were superfluous to make a vaine rehersall of the cure & medicines, seeing it is plainly set out before, and medicines prescribed, which are thereto conuenient.

Of wounds in the neck. Cap. xiij.

WOundes in the neck sometime are made in the fleshie parts onely, sometime in the ligaments, cords, and nerues, sometime in the great veines and arteries, & sometime in the passages, where as broth, meate and drinke, goeth in. If it be in the flesh, it differeth not frõ the cure of other græne wounds, but with stitching, pouder, wine, and other accustomed medicines, it is cured. If it be in the ligaments, cordes, and veines, take depe stitches in the fleshie parts, about the ligamẽts, cords and nerues, and then cure it with oyle of ground wormes, and the plaister vsed in grene wounds. If it be in the great veines and arteries, there is great perill, through the great flure of bloud, stitch the veines and arteries, & vppon them lay this pouder, which Galen vsed in the lyke great flures of bloud.

Rec. Thuris. i. vnce, Aloes, halfe an vnce.

Make these in pouder, & incorporate thẽ with the white of an Egge, vntill it come to the thickneſſe of Honey, then put to it the haires of an Hare, and apply it to the wounded veines or arteries. Or you may vse in place of it, this pouder following.

Rec. Colophonij. iij. vnces. Consolidæ maioris, Lapidis æmatitis, Matthiches, Sang. Draconis, Olibani, ana halfe an vnc.

Make these in fine pouder and vse it as the other afore. Afterward you shall in all cases cure this woũd as is mentioned in the first booke of veines and arteries wounded. But if the wound be in the passages of ayre, meate and drink, you shal stitch it, & vse the pouder, & vse it outwardly as other wounds: but inwardly you shall giue thẽ Dia-

simphi-

ſimphiton and Diadragagantnm,to lick with their tongue, and when the wound beginneth to digeſt,then mundifie & incarne it with this medicine following.

Rec. Mellis Roſati colati.iiij.vnce.Farinæ Hordei.v.vnce. Terebenthinæ.iij.dragmes. Ceræ,Reſinæ. ana.ij.dragmes. Thuris,Maſtiches.ana.j.dragme.Mirrhæ,Sarcocollæ,Mumiæ ana halfe a dragme.Olei Maſtiches.iiij.vnc.fiat emplaiſtrum.

Hetherto haue we ſhewed the cure of woũds organical, which may happen in the firſt or vppermoſt vẽtricle. Now in lyke maner we will direct our pen,and ſet out the cure of wounds,which commonly chaunce in the ſecond or middle ventricle.

Of wounds in the breſt. Cap.xiiij.

WOunds in ẏ breſt either are without percing thorough the ſame, or elſe they are into the breſt. If they be without percing into the body,they are cured as other grẽne woũds,with tow dipt in the reſtrictiue pouder, and layed to the wound, and with the Iewes plaiſter,or the plaiſter accuſtomed in grẽn woũds,or elſe with Balme.But if the wound be percing through,then it is eyther with bloud falling inwardly, & hurte of ſome inward part,or elſe it is without flure inward,or percing of any inward mẽber. How you ſhall by ſignes know if any of ẏ inward parts be hurt,I haue ſet out at large in the fift chap. of the firſt booke.As touching the cure of woũds in ẏ breſt, which are without hurt of any inward part,you ſhal in no wiſe tent thẽ,but ſtitch ẏ woũd,& with ſtufes dipt in wine, vnguents incarnatiue, emplaiſters, & conuenient rolling, heale it vp,like another woũd.But if it be percing through & he bled inwardly, & ſome of the inward parts are hurt, then with all expedition and haſt,you muſt labour to bring out ſuch bloud & mattier as is within cõteined,& you muſt put in a tent large & long,on which you ſhal ſtrike oyle of Roſes,& faſten a thred to the tent,that it goe not in,& ſo put the patient to great paine. The patient muſt be layde vpon a borde on the wounded ſide,and ſo moued to and fro, ẏ the mattier may come out at the woũd, & make iniectiõs of wine or Mellieratum with a ſiring, diligently marking

the quantitie & coulour of the wyne or Mellieratum when it commeth out, for if it be lyke in quantitie and coulour, then you nede no more to make iniections for all the mattier within conteined is quite voyded at the wound: Or you may boyle in oyle of Camomil, Lupines, Mel Rosarum, & Myrrhe, vntil the third part be consumed, then straine it & make iniections with a firing as afore, & then shorten your tent, and apply this mundificatiue following, to the woũd.

Rec. Mellis Rosati colati, halfe a pound. Mirrhæ, Thuris, Sarcocollæ, ana halfe an vnce. Terebinthinæ, two dragmes. Farinæ hordei, Fęnogręci. q. su. fiat emplastrum.

Then you may giue him euerie morning halfe a pinte of the potion warmed, which is vsed in these kinde of wounds, whose compositions is in this sort.

Rec. Centaurij minoris, Costi, Nepitę, Gariophillatę, Pinpinellę, Polosellę, Summitatum canabis, Caulium rub. Tanaceti, Rubię, Glycirrhizę. ana. vj. dragmes.

Boyle all these together in faire running water, vntill the consumption of the third part. Then straine it, and put thereto of clarified Honney, so much as shal be sufficient to make the potion pleasant in tast. You must also giue him to licke, of Diasparmaticon, Diadragagantum, Diasimpiton, or Diacodion, all doe comfort and strengthen the brest. And when the wound is mundified, and the mattier digested, then you shall heale it with the plaister called Diapalma or Phenicinum, and with this pouder following, vsing apt & conuenient rolling, according to art.

Rec. Mastiches, Mirrhæ, Thuris, Sarcocollæ, Sangui. draconis, ana. j. dragme. Make then in fine pouder, and thus haue I shewed you the proper cure of such wounds as may happen in the middle ventricle, being not deadly and mortall, which do vtterlie refuse all kinde of curation.

Of Wounds in the third and lowest ventricle, called vsualie the Bellie. Chap. xv.

THere are properlie three sundrie simple wounds in the region of the bellie, according to which there is three diuerse cures. For either it is a small wound

not

not pearcing through, or else it pearceth through, & so doth hurt of necessitie some of ỹ inward parts, but yet they come not out: Or else it perseth through with hurt of the inward parts, by reason of which they come forth. You shall know what part inwardly conteined, is wounded by their proper signes set out in the fifte Chap. of the first booke.

As touching the cure of these wounds, I will seuerally intreate. If the woũd in the belly be but in ỹ fleshie parts, without persing through, then you shall stitch it, and heale it with Balme, or the plaister accustomed in grene woũds, without further difficultie. But if ỹ woũd perseth through Siphac and Myrach, and yet hurteth no other of the inward members, nor they come not out, then the cure of this woũd shal be as is aforesaid in all things, except stitching. For in the first stitch, put the nædle through the one lyppe of the woũd, but touch not Siphac, & after put the nædle through the other lip, and through Siphac and Myrach, and make a knot vpon the thred. In the second stitch, thrust the nædle through the one lyppe, and through Mirach and Siphac, but in putting the nædle through the other lippe, you shall not touch Siphac but Mirach, and make a knot without, & so procede orderly vntill the whole wound be stitched. And this is it that Galen saith, sow Siphac to Mirach, bicause it is a neruous pannicle, and without bloud it cannot of it selfe take consolidation. But if any of the inward parts, as the Stomacke, Liuer, Splene, Intestines, or Bladder, be wounded, and yet by reason of the smalnesse of the wound, they come not out, nor cannot conueniently be taken forth, then you must with much wisdome and discretion, ampliat and make the wound larger, and if the wound be in such parts as are to be stitched, as the bottome of the stomake, or intestines, then they shalbe sowed as the Skinners doe accustome ouer the hand, and put vpon the seame this pouder following.

Rec. Olibani, Mastiches, Dragaganti, Gummi arabici. Ana ʒ. dragme. Sang. Draconis, Mumiæ, Ana. halfe a dragme. Misce fiatq; puluis subtilis.

And then you may procede to the outward wound and

stiche

stitch it and let the threde of the inwarde wound hang out at the outward wound, that as inwardly it doeth consolidate, so you may take away the thrēde & apply to the outward wound this pouder following.

Rec. Sanguinis Draconis, Olibani, Calcis è testis ouorum, ana. halfe an vnce. Make these in pouder & vse it as is afore saide, and in all wounds of the inward parts, giue the pacient wounded, the drink specified in the xiiii. Chap. of this booke. Also Clisters made with stipticke wines, are meruellously commēded, in like maner is this potage or broth much commended. Rec. Aquę pluuialis vel fontanę, Furfuris tritticei. q. s. Let these boyle one houre, then straine it, & put to it these pouders following, and giue the pacient to eate thereof. iii. or iiii. times a day, or you may prepare him broth made with a Chickin, if he be much infæbled & weke, & put of the foresaid pouder into it, but if Zirbus be wounded & corrupted, then saith Galene, let the black & corrupted parts be bound with a threde or corde, & cut away all that is so bound, & after the stitching of ỹ belly, let ỹ ends of the corde hange out, at the nether part of the woūd. But if the wound be through pearing, without hurt of some inwarde part, & cōming forth of the same, then in this cure there are iiii ententions to be obserued. The first is to put such parts in their proper places, as are come forth. The secōd, to stitch or sow the woūd. The third, is to apply apt medicines. And the fourth is, that none of the inward partes suffer dolor or tumor, but be defended from accidents. The first intention is brought to effect, if the wound be bigge & wide enough, that with soft & gentle handling, they may be put in their due place. But if by this meanes they may not be put in, either for the straightnesse of the wound, or else because the parts be swollen or inflamed, then you must work in this maner. That is to say, if the wound be to straight, thē you shal enlarge it aptly with a conueniēt instrument. But if they may not be put in, because the parts are swolne & inflated, then you shal labour with continuall fomentations to put away the same, which springeth for the more parte of coldnesse of ỹ ayre. Thē take soft Spōges, dipt in warme

water

water, & fomēt the intestines, & after fomēt thē with astringent wine, which is much better then the water, and doth a great deale more strengthen & comfort the intestines. The second intention is performed with soft and gentle hādling & compressing the belly, being certaine ỹ the mēbers without, be rightly placed, then conueniently to sow & stitch vp the woūd according to arte. The third intention which is done by application of medicines, is to lay that comfortable pouder on the wound, whose description I shewed in this chap. aboue. Also stufes with wine, incarnatiue medicines, emplaisters, & other conuenient medicines & roling, as are according to art. The fourth intention of the cure, is done with soft wolle wet in warme oyle, & laye it about the region of the flanks, and giue him clisters of Oyle, Dille, or Camomil: & also vpon the wound it selfe, to power of the same oyles, and apply emplaisters, made with Fenegreke, Linsēde, and Althea. Or you may boyle wine & salte, with as much flower as will suffice to make it thick, and apply it as hot as he may suffer it, vpon his rolling, and ouer all the parts that suffereth paine. And when this is colde, then vse an other, and so doe so manie times, vntil the dolor and paine ceaseth. And as touching the mattier, if any remaine within after the stitching & curing of the wound, there is no great regard to be had, bicause nature doth digest & resolue it: & if there be any multitude, she sendeth it to the flāks, and then the cure of it differeth not from the cure of other apostumes, which happen in the flankes.

Of wounds in the bladder, yard, & testicles. Cap. xvj.

VVOunds in any parte of the bladder except it be in the necke of the same, (which thorough his fleshinesse wil receiue cōsolidation) are incurable. But those that are in the necke of the bladder, yard, or testicles, haue the same cure that other grene woūds haue. You may very wel lay on the woundes of these parts, this medicine following. Rec. Mellis Rosarum, ij. vnces. Olibani, Mastiches, Dragaganthi, ana, ij, dragmes.

Make

Make these in pouder and myxe it with the Mel Rosarum, and lay it vpon the wound, for it doth both mundifie & doth also defend the part from accidents, yet if for the sensibilitie of the part, there happen great dolour and paine, foment the part with oyle of Roses warme. And doe in all other things, as in the cure of grene wounds.

Of the wounds in the parts called Artus, conteining the armes & legges, and first of the wounds in the armes. Cap. xvij.

THese parts named Attus, hath their beginning at the shoulders, and so stretcheth vnto the hands, and beginneth againe at Ischion, and extendeth vnto the ende of the toes of the fæte. The wounds in the arme, haue no peculier cure to it selfe from other wounds, more then that the wounds in this part must haue the most sureft & strong kinde of stitching you can deuise, bicause of the bygnesse & ponderousnesse of the arme.

If the wound be in the flesh, then cure it after the second Chap. of the first booke. If in the veines and arteries, then follow the methode set out in the second Chap. of the same booke. Like as if the nerues be wounded, or else the neruous places, as the ioynts, and heads of the muscules, the ligaments and tendons, and such like. &c. You must obserue the doctrine conteined in the fourth Chap. And if the wound be in the bone, you may vse the like curation, that I haue taught in the ix. Chap. of the same booke.

Furthermore, if the wound be both in flesh, veine, arterie, and sinnow, then you must follow all the precepts set out in the ii. iii. iiii. Chap. And compound & mixe your medicines together, according as the wound is in more parts then one. And if after the cure of the wounds in the ioynts (as many times it fortuneth) there are any knots or hardnesse left, whereby the ioynts haue not their free motion, then you shall take away this accident with this plaister following.

Rec. Lithargirij, iiij, vnces, Muscilaginis fęnogręci, Sem. lini,

ana

ana,ʒ.viij.Muscilag.Maluiscici,ʒ.vj.Resinæ, ʒ.xvi. Oleorum Camomillæ,Oluarum,ana,j.li.& ℔. Ceræ.ʒ.vj. Farinæ fænograeci, Sem.lini,ana.ʒ.ij.Masticbes,Thuris,ana.ʒ.j. Axungiæ,Pingued.Gallinaceę,Anserinæ,Anatis,ana.ʒ.ij. Make of these a plaister according to art, and applie it to the knots, and it will resolue them and put them awaie.

Of wounds in the knees, thighs, and legges. Chap.xviij.

THE same cure that is required to the woundes in the armes, is also vsed in wounds of the thighs and legges. But the wounds that happen in the ioyntes, as in the elbowes,knæs,and other like,be most perilous and daungerous,because of the chords,ligaments,nerues,and sinnowie partes,which bæing wounded,bring most grieuous paines and daungerous accidents. Wherefore beside the cure set out of wounded nerues and sinnowie parts,in the 4.Chapter of the first booke,you must with all diligent skill labour to kæpe the wound from paine & accidents, by purging,letting bloud,clisters,diet,repercussiues,and defensatiues,and medicines that doe cease dolour, among other this is one. Rec.Olei rosacei,ʒ.iij.Lumbricorum terræ,ij. drams. Make wormes in pouder, and mixe it with the oyle, and bæing made hot,dip cotton in it,and laie it to the wound so hot as he may suffer it.Then vpon it you shall laie a linnen cloth foure folde,dipped in wine,in the which these hearbes following are boiled,then wet your roller also in it, and roll the member,according as it is shewed in our Institution of Chirurgerie. Rec.Pilosellæ,Arthemisiæ, Betæ, Herbæ candelæ,ana.m.j.Vini optimi,iij.pound. Also to defend the place from accidents,this defensiue following is right precious & good. Rec.Olei rosacei.ʒ.iiij.Boli armeni.ʒ.j.and a halfe,Terræ sigillatæ,Aceti,ana,hafe an ounce,Caphuræ,halfe a dram, Succi solatri,Semperuiui,ana.j.dram. Make all these together in forme of an vnguent, and vse it about the wound. The other medicines hæreto belonging, you shall finde in the Antidotarie,and also in the 4.Chapter of the first booke.

And thus haue I set out to you both brieflie and plainlie the cure of wounds in the instrumentall parts, & also wherin they differ from the wounds in the similier parts. Now will I shew you the cure of wounds which happen through biting of a mad dogge, or stinging with a Snake, Adder, Scorpion, or such like, and then will finish this second booke.

Of wounds comming through biting of a mad dogge, stinging with a Snake, Adder, Scorpion, and such like. Chap. 19.

ALthough the cure of this wound rather doth appertaine to the Phisition than to the Chirurgion, yet (requiring no small part of this art to the cure of the same) I will shew the cure of it according to the most approued authors, Greckes, Arabians, and Latinists. And for because all virulent biting of venimous beastes and Serpentes haue well nere one cure, I will shewe the waie and manner to cure the biting of a mad dogge, vsing it for an example to follow in the curation of the rest. Galen in the 13. booke of his Therapeutik methode, sheweth two indications in curing these wounds, the one is, the euacuation of that virulent liquor, the other is, the alteration of that which causeth dolour and pain. The euacuation of the virulent liquor, is done by hot medicines, which doe attract and draw. Among which, Aetius doth meruailously praise Theriacam Andromachi, made plaister wise, & applied to the wound. Also he vseth a plaister vnto the same being of meruailous effect, whose composition is in this sort following.

Rec. Argenti spumæ, Cerusæ, Resinæ, ana. j. pound, Olei veteris. iij. pound, Ceræ. vij. ounces, Ammoniaci, Galbani, ana, iij. ounces. Make of these a plaister according to art, and applie it to the wound. Also they vse to bore the wound and to cauterise it, either with an hot yron or with some caustike medicine. Also many vse to pull off the feathers from the rumpe of an hen, and holde the rumpe to the wound to suck and draw out the venim. Cornelius Celsus doth much commend salt to be rubbed on the wound. Guido hath a plaister

verie sharpe, but yet much commended, and is made in this manner.

Rec. Galbani, Sagapeni, Opoponacis, Assæ fetidę, Myrrhę, Piperis, Sulphuris, ana. ℥. ℌ. Stercoris columbini, Anatis, ana, ℥ ij. Calaminthæ, Mentastri, ana, ℥ j. Dissolue the gums in wine, and with honie and oyle make therof an emplaister. Take also diligent hede to enlarge the wound and kepe it open at the least fortie daies, and prouoke matter to flowe out as much as is possible, and when you suppose the venim to be al drawen out, thē you shall with mundificatiues, incarnatiues, & medicines that doe cicatrise, heale the wound. But you must not forget to applie medicines inwardlie against venim called Alexipharmaca, which of their propertie doe resist poison. Among which Galen in his ii. booke, intituled, De facultatibus simplicium medicamentorum, reciteth this medicine following to be of most meruailous vertue against the biting of a mad dogge.

Rec. Thuris. ℥. v. Gentianę, ℥. x. Cancrorum fluuiat. ℥. xx. Make these in pouder, and giue him two spoonfulles of this pouder in fountaine water for the space of fortie daies. And vnto the wound the same Galen saith, his Maister Aschrion vsed this plaister following.

Rec. Picis. j. pound, Aceti acerrimi, Sextarium italicum, Opoponacis. ℥. iij. Mixe them and make them in a plaister according to arte. This is the methode of curing these kinde of wounds, and these be the chiefe and principal medicines, which like as diligentlie I haue collected and gathered out of the principall authors writing of the cure of these kind of wounds, so wish I them to put it in proofe when necessitie requireth, and also to take thankfullie these my labours and paines.

FINIS.

The third booke of the Enchiridion. Setting out the remouing of such accidents as happen to wounds: By Thomas Gale, Master in Chirurgerie.

NOw that we haue brought to an end and shewed the methodicall cure of wounds, as well in the similer as also in the organicall members of mans bodie, and haue set out diuerse, & those both excellent & also approued remedies for the same, I thinke conuenient in this third booke to shew the perfect curation of such accidents as doe customablie follow in wounds, either thorough the nature of the wound, or vndiscrete vsage of the patient, or else through the errour of the Chirurgion. These accidents are called of the Greeke writers Symptomata, & be such, as when they happen in wounds, you shall neuer cure the wound before you haue quite put them away, & the accidents which commonly happen in wounds, for the most part are these following: that is to saie, dolour, inflamation, distemperance, a feauer, pruritus, conuulsion, ỹ palsie, sincope, & alienation of minde. Of these so briefly and exactlie as I can, I will in order make mention, willing this booke to supplie onelie the place in time of nede, where the learned Phisition cannot be had. And first we will begin with that accident which is called dolour or paine in wounds.

Of dolour in wounds, and the asswaging of the same. Chap. 1.

THis accident, called dolour, paine, or griefe, bringeth a flure of humours to the wounded parte, & stirreth most grieuous accidents, as Phlegmon, otherwise called inflamation, Apostumes, & such like, yea, & that in those bodies which are pure and free from excrements, wherefore with all diligence you must labour to cease the dolour, or at least, to mittigate it somewhat, applying to the place fomentations

with

with oyle of roses warmed, mixed and tempered with the white of an egge. But if the paine be so vehement, that with this medicine, it will not be mittigated, and that you are constrained to vse some stupefactiues, you shall make your fomentation with oyle of Poppie, and if great vrgent cause constraine you, you may adde a little Opium to it, or oyle of Mandrage. There are other who do much commend this emplaister following. Rec. Radicis Solani, ℥ ij. Foliorum maluæ. m. ij. Furfuris triticei, iij. ℥. Olei rosacei, q. s. fiat emplastrū. Also other do applie to the affected part an emplaister made of bread or wheate flower boiled in milke and some oyle of Roses. And these ceaseth the dolour and paines two waies, both in resoluing some part of the mattier gathered by reason of the flure, and also in assuaging somewhat the vehemencie of the paine by the qualitie of the medicine. But of the medicines which do assuage and cease dolour, you shall haue it more at large set out in the Antidotarie.

Of Inflamation and Apostumation. Chap. 2.

That which the Grækes call Phlegmone, we vsuallie tearme in our language, Inflamation, and is no other thing than a vehement heate stirred in anie parte of the body through the force of the humor flowing to the part. There are foure intentions to be followed in the cure of an inflamation. The first standeth in the right order of diet: the second, in ceasing the flure or diuersion of the antecedent mattier: the third is an euacuation of the mattier collected and now impact in the part affected: the fourth standeth in the correcting and putting awaie of accidents. The first intention is fulfilled in the right vse of the fiue things called Non naturalis, as in the pureneſſe and temperatneſſe of the aire, the meate and drinke, colde, moist, and smal. To flie exercise, and to vse quiet and rest of bodie. To vse moderatneſſe in sleeping and watching. To beware of surfetting, and laying (as they saie) gorge vpon gorge. To kéepe alwaie the bodie soluble & loose. To flie all vehement perturbations & affections of the minde, as anger, contention, chiding, & such

like. Last, you must abstaine from Venus seruice, as frō the greatest pestilence that may be in this disease. The second intention, which is in ceasing & diuersion of the mattier that floweth, is by opening a veine in the contrarie side, if ẏ age and strength of the patient can suffer it. Also applie medicines to repell and driue back, among which Galen praiseth Oxycraton (that is) water and vineger boiled together, and foment the place with a spunge dipt in it. Also you may boile in some astringent wine the rinde of a Pomgranad, & foment the place therewith. Or else applie to the place inflamed Cataplasme, which Galen in his second booke ad Glauconem doth so much commend, whose composition is in this manner. Rec. Semperuiui, Maliconi, Sumach, sing. q. s. Boyle this in wine vntil it come to the forme of a Cataplasme. Also Auicen in his 3. Fen. 4. booke. First Tract. Chap. 3. describeth another of much efficacie. His composition is in this forme. Rec. Succi Sēperuiui. i. pound, Vini nigri, half a. pound, Farinæ Hordei ʒ. iij. Malicorij, Sumach, ana, ʒ. ẏ. Boile these and make therof an vnction, but or you boile these, you must make the Malicorium and Sumach in pouder. The third scope in euacuating, that is collected in the beginning of inflamation, is done with repercussiue medicines, and to mixe with these such as doe digest the mattier, among which this is one.

Rec. Rosarum, Florum camomillæ, ana. ʒ. iiij. Sapæ, ʒ. j. Aquæ fontanæ, one pound and a halfe. Boyle these and make an emplaister of them, but if the inflamation be in Augmento, then you shall mixe with your digestiue medicines that represse and letteth the flure. But when the inflamation is in Statu, then mixe with the foresaid medicines, medicines that doth somewhat mittigate, as oyle of Roses. Also you may vse this emplaister, which in this sorte following is described. Rec. Parietariæ, Maluæ, ana. m. j. Furfuris, Farinæ volatilis, ana. ʒ. i. Fenogræci, Anethi, ana. ij. ounces, Olei camomillæ. ʒ. vj. Boile all in wine while they come to ẏ substance of an emplaister. There is also another excellent plaister which Galen vseth in the bigour of an inflamation, and is thus made. Rec. Medullæ panis frumentacei, one pound.

Let

Let it steepe in hot water for the space of an houre, and then straine it, and put to it Mellis optimi. ℥.iij. Make of these an emplaister, and applie it to the inflamation, but if the inflamation be as they call it in Declinatione, you must onelie vse medicines to digest, which maye euaporate the matter remaining: if ỳ inflamation doth end by euaporation or discussion. But if it turne into an Apostume, then you must vse medicines to suppurate, to open, & to mundifie, of which you shall haue a large discourse in my booke of Tumors against nature, and also in my booke of curing vlcers. The fourth scope of removing, or rather defending the inflamation from accidents, as dolour, Feauer, Apostume, and such lyke, requireth diuerse and sundrie remedies, which because they bee accidents also chancing in wounds, I will intreate of them in their proper Chapters.

Of remouing and taking awaie distemperance in wounds. Chap. 3.

That distemperaunce which happeneth to mans bodie, whether it be hot, cold, moist, or drie, or else compounded of these simple, Galen and all the Grecians comprehended vnder the name of Discrasia. Of which, if to the wound there commeth a hot disposition, which you may easilie coniecture by the great redneste and vesication, you must infrigidate the place, not with Henbane or Mandrage, but rather with Roses, Plantaine, and Vnguento albo, which doe as well desiccate, as moderatelie make colde. But if the distemperance be colde, which you may iudge by the softneste and Leaddie coulour of the skinne: you shall put these awaie by medicines contrarie in qualitie, which doe moderatlie heate. So ỳ you may not applie Rosen, Pitch, or Aspaltum, but Wine, Vnguentum nigrum, or Fuscum, or Basilicon. So in lyke manner if the wounde bee too moyst or too drie, they must be cured by their contraries. And heere is to bee noted, that if the distemperaunce bee in heate and moysture, or else in heate and dryneste: in colde and moystneste, or else in colde and dryneste,

then your medicines vsed in the simple distẽperatnesse, must be mixed together contrary to the compound distemperance.

Of conuulsion which happen in Woundes. Chap. 4.

SPasmos, which we call conuulsion, is no other thing than a depravate motion chauncing to the voluntarie facultie of mouing through sickenesse. Conuulsion chaunceth three sundrie waies, by repletion, by inanition, and by societie or participation wt the braine. The generall methode in curing these three sorts, is to holde stronglie, and to chafe and annoint them with oyle of Lillies, or else with common oyle in defect of it. The conuulsion springing by inanition is cured in this manner. First, foment the place with oyle, or els with Hydroleum made warme. Also if no other thing be let or impediment, you shall vse a bath in which is boiled the head and feete of a sheepe, gote, calfe or lambe. Also in which is put Mallowes, Althea, Violet leaues, Beates, and Mercurie, putting to it the third part of oyle. Some there bee which with great profit do vse this liniment following, anointing with it the ridge bone or spine of the backe, and all the ioyntes.

The Liniment. Rec. Olei violarum. ℥.iiij. Amygdalarum dulcium, Pinguedinis Gallinæ, Medullæ crurium vituli, ana. ℥.vj. Pinguedinis vituli, Hedi, ana. ℥.x. Boile all these in the decoction of Mallowes & roots of Althear, vnto the consumption of the sayd decoction, then straine them and make a liniment of them, and vse it as I haue aforesayd. But if the conuulsion come of fulnesse, you must cure it by euacuation of the whole bodie. But ther be two waies to euacuate, that is to saie, by letting bloud, & by purging. But we let bloud in those bodies in which there is abundance of bloud, or els where inflamation hath caused conuulsion, although there bee no abundaunce of bloud. But if the fulnesse bee of humours, then you must purge ỹ which doth offend, whether it be flome, cholar, or melancholy, but grose & viscous humors are to be expelled with Hiera, Piera, & Agarike. You must

also

also vse sharpe clisters,also gargarismes,apophegmatismes and neesing, ỹ the grose fleame may come forth by the nose and mouth.The body being thus purged and let blood,annoint the neck,armepits,and flancks , with this liniment following.

Rec.Oleorum liliacei,Costini,Spicę,ana.ij.vnces.Laurimi, Castorei,Euforbij,ana.halfe a dragme.

Mixe these together,and vse it as before saide.Also Rogerius and Theodoricus,doe much in this sickneſſe praise the vnguent,whose compositiõ is in this maner.

Rec.Olei muscellini.j.vnce.Petrolei,halfe an vnce.Olei cõmunis,Butyri.ana.iiij.ʒ. Styracis calamitæ,Rubræ.ana. ij.ʒ. Mastiches,Olibani,Gummi hæderæ.ana.halfe an vnce,Ceræ. an vnce.

Make these in an vnguent, according to arte, and with this vnguent moderately heate, anoint the whole necke,& all the spine of the backe.Last of all,if the conuulsion commeth by consent and societie of parts, and springeth of dolor,you must cure it by medicines called Anodina,of which we haue made mencion in the first chap.of this third booke, & also in our Antidotarie . But if it appeare by the byting or sting of any venemous beast or serpent, you shall apply bores to the wound, and make a plaister of Triacle,& lay to the place,and vse the same methode of curing that is set out in the last Chap.of the second booke. And if conuulsion insueth, because sharpe and corroding humours doe byte & fret the mouth of the stomacke:then with all diligence you must prouoke him to vomit , and after strengthen the stomacke both outwardly and inwardly,with apt and conuenient medicines,following the counsel of some expert Phisition . Furthermore,in all conuulsions,this is a general rule,you must strengthen and corroborate the braine.Therfore shauing the haire, you shal fomẽt the head,neck,armepits,flankes,spine of the backe,& ioynts , with oyle of Lilies.If these doe not take place,thẽ according to Galens doctrine,you shall cut the nerue a sunder. For (saith he) it is better to suffer hurt and losse of one part,then to looke for a certaine and ineuitable death.

Of the Palsey comming of a wound. Cap. v.

PAralysis, which we in English call the Palsey, is the relaxation and molifying of the nerues, with losse of feeling and mouing of one side or part of the bodie. This accident sometime followeth vehement conuulsions, and chiefely after great woundes in the head, and in the spine of the backe. It doeth show forth this might. The cure of the Palsey is in this wise. First you must euacuate the bodie by purging of the humours, and euacuating the bodie. Yea by letting of bloud also, if necessitie requireth. Further to diuert the flure which goeth to the resolued part, vsing also a cõuenient dyet, in all which it is necessary to cõsult with the learned Phisitiõ. These hings being done, then let the Chirurgion with diligence apply locall medicines, among which many doe vse Emplaisters, Cataplasmes, Unguents fomentations, bering, and diuers other remedies. But Guido (out of Mesue) hath chosen a most precious liquor, and against this accident of most wonderful effect, with which he annoynteth the spine of the back, the necke, and the part resolued, and surely there is no remedie comparable to it. Yea, and Guydo leauing all other medicines, held him selfe wel satisfied and pleased, onely with this so precious a treasure. But I will omit the praise of so noble a liquor, seeing my wyt is to simple, & my penne to rude to doe that herein is required, and therefore I let that passe, and wil show you the composition.

Rec. Myrrhe electæ, Aloes hepaticæ, Spicæ nardi, Sangui. draconis, Thuris, Mumiæ, Opoponacis, Bdelij. ana. ij, ℥. Carpobalsami, Ammoniaci, Sarcocollæ, Croci, Mastiches, Gummi Arabici, Styracis liquidæ. Ana. ij. dragmes. Ladani electi, Succi castorei. Ana. ij. dragmes. &c. Muſci. halfe a dragme. Terebinthinæ optimæ ad pondus omnium.

Beate all those to ponder, that are to be brought to pouder, and mixe all these with the Turpentine, and put them in a

in a vessell of distillation, and with a softe and gentle fyre drawe out this most precious liquor, and if to this composition you dyd adde such hearbes as are vsed in curing the Palsey, you should make your medicine so much the more precious.

Of Syncope or sounding, through cause of the wound. Cap. vj.

GALEN in the twelfth booke of his Therapeutike methode, sayth, that Syncope is a sodaine decaye of strength, comming through immoderate euacuation, vehement dolour, continuall watching, intemperateneſſe of the principal parts, or vehemēt perturbatiōs of the minde. But Syncope which followeth in wounds, springeth for the more part, of great effusion of bloud, or elſe of vehemēt dolour. And you may easely coniecture the comming of it, by the weakeneſſe, pulſe, paleneſſe of face, colde sweates about his neck and temples. And this accident is not lightly to be regarded, bicauſe it soddenly commeth, and is as if were the image of death. Therefore comfort the wounded man by all meanes possible. Suffer no great companie to be where hée is, and before this accident come, giue him a péece of fine white bred sopped in ỹ beſt wine you can get, into which wine you shall put roſe water, borage water, and a cake of Manus Chriſti perlati, and after you haue toaſted of the bread, giue him of ỹ wine to drinke, and comfort him with swéete smelles, and chafe his temples with Roſe water, and if he begin to sound, caſt colde water on his face, and chafe and rub his temples with your hands, pull him by the noſe, exclaime and call him loude by his name, rubbe his hands, and pull him by the eares, and doe what you can to reuiue and quicken his spirits, as is the cuſtome of learned Phiſitions.

Of alienation of the minde comming by reaſon of the wound. Chap. 7.

Delyrium

Delyrium, or alienation of the minde, is a motion deprauate, of the principal facultie: taking his beginning of euill fumes ascending to the head, and also of intemperateneſſe of the braine: it doth diuers times fortune the braine to suffer of it selfe, and sometime by consent with other parts. But I will speake onely of that alienation of minde, which commeth by cõsent of parts. Therfore if that alienation of mynde apprehendeth the patient after he be wounded, you muſt cal some ſkilful Phiſition, which with potion, frictions, binding of the hands and feete, ſharpe cliſters here to apt to attract the fumes and vapours from the head, & when the vigour of this accident inſecteth, it is good to powre on his head, the decoction of Poppie. For Galen ſaith, we muſt labour to abſtaine somewhat the braine, and prouoke ſleepe by all meanes poſſible. Auicen ſaith, that many haue bene deliuered of this accident, by vſing certaine dayes, the decoction of Brionie rotes. And thus I haue ſet out the moſt notable and perillous accidents, which happen in wounds, with their intentions curatiue, and proper medicines vſed in the ſame. Wherefore I thinke it good here to finiſh this third booke.

FINIS.

The fourth booke of the

Enchiridion, comprehending the maner of curing fractures, and luxations: by Thomas Gale, Maiſter in Chirurgerie.

Seing I haue hetherto in their proper boks ſet out the cure of all thoſe woũds, which may happen in the ſofter parts of mannes bodie, as in the fleſh, muſcles, veines, arteries, nerues, tendons, ligaments, and ſuch like: and haue further ſhewed ſufficiently the methode to put away ſuch accidents as happen to great woũds (for to great wounds cõmeth great accidents) time

now

now taketh me by the sleeue, and saith, direct thy penne, & addresse thée to wryte of those woũds, which happen in the hard parts of mans members, that is to say, in the bones. Such be those wounds which are called fractures or breaking of bones, in Greke Catagmata, and also of luxations & dislocations of the same, which bicause both are affections comming to the bones, I will wryte of both in this fourth & last booke of this Enchiridion, beginning first at the fracture of bones, which done, I wil also intreat of dislocatiõs.

Of the true and perfect cure of bones fractured. Chap. j.

BEfore I doe take in hand to intreate of ỹ cure of bones fractured, I will set out what a fracture is, that thereby it may be the better vnderstoode, that hereafter shalbe wrytten. Therefore a fracture is a solution of continuitie, made in the bone. Of bones fractured, there be thrée differẽces. One when the bone is broken in length, another when the bone is fractured ouerthwart: the third, when as the fracture is oblique or croked.

Albucrasis, and other latter writers, make the differẽces of fractures, not according to the bone fractured, but after the place affected, as if the nose be broken, or the braine panne, or Iawes, rybbes, backbone, armes, thighes, legges, fingers, or other part: which in dæde be not differences of fractures, but as I sayde, of the place affected, according to the nature of which, the bones broken, haue speedier or longer time or they can be vnited again together. For the Cranium is ioyned together in xxv. dayes, the arme or legge in the space of lx. dayes, the Follilles, aboute xxx. dayes, the nose taketh perfect consolidation in xviii. dayes, the ribbes in xxi. dayes, the Iawes, the bones in the handes, and fæte, about xx. dayes. And so in like sorte is to be spoken of the time of curing other bones fractured, according to their natures, also the time may by longer or shorter, according to the age of the patient, time of the yére, dyet & order of lyfe. All which must be diligently considered of him that wil appoint

point any time determinately in curing of bones. But now to ỳ true & perfect cure of bones fractured. And forbicause the fracture is a solution of continuitie, there is required the vnition againe of the same. But to the vnition of the fracture are required foure scopes or intentions.

The first is that the parts of the broken bones be ioyned and put together in their proper place. The second intention is, ỳ they being so reduced to their natural forme, may so be conserued and kept, without motion.

The third scope is, that the partes of the broken bone may be conglutinated and ioyned together, by engendring of Callus. The fourth and last intention is, to correct those accidents, which doe come after the fractures of bones. Of these foure scopes & intentions, according to my poore knowledge, I will seuerally intreate.

How the parts of the bone fractured, are to be vnited together and put in their proper place. Cap. j.

FIrst of all it behoueth to note diligently, whether the bone broken be out of the naturall place or not, which you shall know by these signes, saith Cornelius Celsus. For if the member where the bone is fractured, doth extēd it selfe and stand vpward, and is with pricking, and when it is touched, it sheweth an inequalitie. These be sure tokens and signes that the bone broken, is out of his natural place, wherefore after the counsel of Guydo de Cauliaco, the member is decently to be extended, & that parte of the bone that is depressed, is to be lifted vp, & that other parte which is standing vpwarde, must be put downe, and this with so much lenitie and smal paine as is possible, vntill the ends of the bone fractured doe mæte and be vnited and brought to their naturall forme and place. Neither is this possible that the bones fractured and brought out of their naturall place, can be reduced & rightly vnited and placed, but with some force, more or lesse. So that if the member be smal & of no great strength, as ỳ finger or other like mēber, one man may well extend and stretch it out, applying his one hand

on

on the one part, and the other hand on the other part of the broke bone, vntil both endes of the bone fractured, do méete and ioyne together. But if the member be great, hauing strong nerues and tendons, then one man is not sufficient, but there is required two: specially where ỹ fracture chanceth in the thighes, legges and armes, of strong and robuste persons. But you must diligently take héede that the member be neuer to vehemently or immoderately extended and drawen out, for that doeth bring (speciallye in harde and drye bodies) vehement dolour, feuers, conuulsions, & sometimes the Palsey. Yea, it happeneth often by this meanes, that the fibres and threedes in the heads of the Muscles, be broken. Wherefore there is much wisedome and discretion herein to be vsed. But now to that from whence we are digressed. First the sicke man is to be set in a chaire, or else if it be more conuenient, layed on his back on the bedde. Then two men for this vse prepared, you shall commaund the one to holde with his hands the part of the member aboue the fracture: and to the other, to laye his hand on the nether and lower part of the member, vnder the fractured bone. And this being done, willing them so long to stretch and put out the member, vntill both endes of the bone doe méete, then thou with thy hands shalt handsomely forme it and put it in together, labouring to bring it to his naturall figure and forme. But if the member be such as that with their hands onely, they are not able to extend the same, then you must haue bãds of which the one shalbe fastened aboue the broken bone, the other vnder: and so the one man placed at the sicke patients head, and the other at his féete, They shall stretch and extend out the member as is sufficient with the bands in their hands.

And this is a sufficient token that the bone broken is reposed in his right place, and that both endes be vnited together: when that the pacient féeleth a releasing of his paine and dolour.

The bones being thus ioyned together, least that they should goe a sunder againe, it is necessarie to rolle & bynde it in such wise and maner as shal here after be set out.

And

And if it fortuneth that the broken bones be not united but remain out of their place a few dayes, ther accustomably followeth great inflammation, and no small perill and daunger to the nerues and tendons. And thus briefely and sufficiently I haue set out the first intention. There is also an instrument vsed to extend out the mẽber with, of which Hippocrates and Paulus maketh mention: which you may prepare and vse, but I omit it, and vse the way aboue said, as more apt and without perill.

How the broken bones vnited and ioyned together aptly, may be kept and remaine in the same figure, so that they may come to their former estate. Cap. iij.

When as the broken bone is reduced to his right place, and is formed according to his natural figure: it is very expediẽt to kẽpe it in the same, which cãnot be in any wise if that the member be moued. Wherefore it is necessarie by all meanes possible to kẽpe the mẽbers without motion. Which thing although the patient perhaps in the day time will carefully regard, yet at night whẽ deepe slẽpe doth occupie his sences, he shal of force neglect. Therefore that as well day as night, slẽping as waking, the member may be cõserued without motion, it shalbe necessarie to vse apt & conuenient ligature & rolling. But before you doe goe about to rolle the mẽber, it is very good to mixe the white of an Egge & oyle of Roses together, and wet therein a soft linnen cloth of such bignesse as may compasse not onely the place where ỹ bone is fractured, but also somewhat of the sound parts. Then this being applied to the affected part, you shall next bynde and rolle the member, in which you must diligently regard that you compresse not the member by to hard rolling, and so the nourishment cannot come to the part, and also dolour and paine may cause flux of humours and inflammation, neither must you bynde it to slacke and lose, for then the broken

broken bones will separate againe and go in sunder. Therfore you shall vse a regarde herein, that you binde not the member to straight nor to lose, but follow herin both your owne discretion and also the feeling of the patient. And as touching your rollers, you must haue two made of soft cloth, whose breadth & latitude must be such, as in rolling there be no loosenesse, wideneſſe, & plaits: the length of these cannot certainlie be shewed, but must be according to ỹ bignesse of the fracture, & thicknesse of the member. The beginning of the first roller must be vpon the fracture, & so rolled about iii or iiii times, & thẽ rolling vpward vntill you come to the sound parts which must also somwhat be rolled. So by this meanes ỹ bones vnited shall more firmly remaine together, & the flure of humors staied ỹ they cannot come to ỹ affected parts. The beginning of the second roll must also be put vpõ ỹ fractured place, going also iii, or iiii times also about the same, & so continuing downward vntil you haue compassed the sound parts, which done, you must with the same roller ascend vpward againe vntill you come somwhat aboue the first roller. Therfore this roller must be halfe as long again as the first roller is. The vtilitie of this second rolling is, ỹ it putteth ỹ is superfluous vnto the lower parts, & suffereth not anie flure of humours to infest & noie the part affected. These rollers would be wet in water and wine mixed together before you doe vse them. And if there be anie vehement paine or inflamation, then the mẽber would be wrapped about with fine woll wel carded, or else with stuffes wet in Oxicratum, & the ligature or rolling would not be hard, but such as may defend and kẽp the vnited bones together. Furthermore, because these bindinges and rollings are not able both to defend the member from accidents, and also to kẽpe the member together and confirme the same: Hippocrates vsed certaine plaisters or cerotes, or such like, which must be put vpon the ii. rollers, & is as it were ỹ third ligature or roll, among which is vsed Cerotũ humidiũ, made of wax melted in oyle of roses. But if that there be besides the bone fractured, the solution also of continuitie in the flesh, then you shall not in anie wise vse either cerote or oile, be-

cause it will make the vlcer filthie and stinking. But in their place to vse Plumacions that be long, dipt in red and stiptike wine. And one thing which kepeth the member frō dolour and paine is, after that the same is rolled and aptly put together, to plate it in his naturall forme, so nere as you can, & it is most nigh vnto the naturall forme & figure, when it is so laide, as is with leall paine and griefe, but because this forme & figure should be surely conserued & kept, and accidents put awaie, the later Chirurgions haue vsed to put about the ligatures certaine splents at the first dressing, binding them so about the member, as the patient or accidents may suffer. Galen and the olde writers vsed not splents before the seuenth or ninth date, notwithstanding it is conuenient to vse the splents at the beginning, so y they through binding compresse not the member, and make dolour and inflamation. The splents must be equall, smooth, euen, not crooked or rugged, and in the middell thicker than in the other parts, that they may be the more able to streng then the member in that place whereas the bone is fractured. The way and order in applying splents is in this wise. There must be clothes three or foure folde dipt in rose water, and laide vpon the rollers, according as the member requireth. Then the splents inuolued, and wound about with woll or cotten must be placed round about the member a finger breadth a sunder, & bind them moderatly and gentlie, y you compresse not the member, and in ane care take hed y none of the splents touch ane ioynt, if ane be nere the fractured bone, for that will make vlceration and inflamation in the same ioynt. Therefore if the fracture be nere to ane ioynt, ye must in y part make your splents shorter, smaller, & lighter, and if no dolour, no inflamation, no itching, no vlceration commeth to the fractured part, then you may let the splents remaine on, vnto the vii. day, or ix. day, yea, or to the xi. date. But if ane of these happeneth, then it shall be conuenient to vnroll the member the third day, and foment it with luke warme water, whereby both the sharp & accoding matter is washed, the paine eased, and the itching put awaie. And thus much touching the second intention.

How

How the parts of the bones broken may be conglutinated and ioyned together. Chap. 4.

Seeing that the fractured bones cannot be conglutinated & made to grow firmlie together, neither by apt and conuenient rolling nor splenting, nor by putting of them in their naturall forme and figure, except there be made some-what to grow out of the nourishment of ỹ bone, which may cause them to close and grow together, they call this Callus, which like a glew doth glew them together: therfore ỹ third intention is to make this Callus to growe by all meanes possible, but this must be engendred of grose & earthie parts, such is the nourishment of the bones. This Callus after the minde of diuerse, do begin to grow about the tenth or xiiii. daie. And that it doth begin to growe you shall perceiue and iudge by these signes and tokens. The dolour & paine is asswaged, the inflamation ceaseth, the tumour vanisheth awaie, the naturall coulour of the member commeth againe to the same. And for that the chiefe and principall waie to make Callus grow and ingender, standeth in apt and conuenient diet, I will briefflie vtter the same vnto you. Although at the beginning of the fracture Hippocrates counsaileth that the patient doe vse a thin and small diet, & that he doe abstaine from flesh and wine for the space of x. daies, yet now when our scope is to ingender Callus, you must license him to vse a more large diet, and meates that make good iuyce, & that grose and somewhat viscous, for of such nutriment ỹ bones are nourished & Callus groweth. Therfore they commend much fine and pure wheate boiled in cleane fountaine water, while the wheate doe burst, and the water being so consumed is somewhat thicke. They call this with vs in England, Frumentie potage, and I suppose it to bee that which diuerse call Alica. Also the heads & fet of beasts are verie good in this case, chiefflie of a kid or else a weather, for these doe much nourish, and be of grose and viscous iuyce. Also giue him to drinke good redde Wine when as he goeth to his meate, but let it bee moderatlie taken.

The bignesse of Callus must not be either bigger or lesser than is requisite, for being bigger or lesser it bringeth paine to the muscles, and if it be lesser, then it is vnable to defend and strengthen the fractured bones. How Callus shall bee that it be neither to big or little, you shall see set out in the Chapter following.

How the accidents which happen to fractured bones are to be remoued and put awaie. Chap. 5.

This fourth scope and intention, although it be the last in order, yet is it not the least in vertue and vse, for it doth shew how to remoue all accidents and things against nature, which doth let and hinder the curing of the fractured member. Such accidents for the most parts are dolour or paine, inflamation, itching, a wound, immoderate dryncsse or moisture, letting & hindering the generation of Callus, Gangrena, hardnesse, & the quantitie of Callus too much or little. These, as I saide, be the chiefe enimies to hinder natures worke, and I will set out the waie to expell and put away euerie of them, beginning first with the accidents called dolour or paine, & with inflamation, named of the Grecians Phlegmone. Therefore if these accidents do infest & besiege the fractured member, after it be bound, rolled, & dressed, you shall with speed lose the ligature & take awaie the roller, and then the member being bare and naked, you shal foment it with oile of roses, vineger, & with other like medicines before remembred in ỳ 3. booke, wher I writ particularly of the cure of these accidents. Neither shall you vse again either ligature or splents before the dolour be all waged, & the inflamation ceased, except it be onelie to strengthen the member and kæp it together. But these accidents being expelled, then vse splentes and rolling as you did before. But if this itching, or as they call it in Latine Pruritus, with kernes or matter happeneth, then Hippocrates and Galen vsed to foment the place with water temperatlie hot. And the later Chirurgions in the like case doe applie salt water, vnguentum album, vel vnguentum Populeon, and binde the member, as is aforesayde. Further more, if to the fractured

member

member there happeneth a wound either at the breaking of the bone, or else made of ỹ Chirurgion, that he may take out the sheeuers of the bone molesting the muscles, or howsoeuer it doth happen, you must, if there be anie flure of bloud, labour to stanch and stay the same with apt and conuenient remedies set out in this booke. If inflamation followeth to the wound, it must be repelled. If the flesh bee bruised and contused, then scarifie the partes for feare that Gangrena doth followe, and if so happeneth that Gangrena doeth followe, or anie deuouring putrefaction, then you must cure it as is set out in our methode of curing Tumours against nature. And if none of these happeneth, then you shall vse the like medicines to the cure of the wound that you doe to grene and fresh woundes. Furthermore, if the bones bee immoderatlie drie, whereby the growing of Callus is hindered, it shall bee conuenient the third and fourth daie, to foment the place with water, and when as the flesh doe rise in a tumour, then cease further to vse fomentation, except you doe entend to euaporate and digest the multitude of mattier, then cease not vntill the tumour goeth awaie. And if moistnesse followeth in the fractured member, and letteth the ingendering of Callus, you shall put it awaie with conuenient ligature and rolling, and things that doth moderatly exicate. Furthermore, you shal giue diligẽt hed when Callus doth grow, ỹ it may be staied, least that it ware to greate, or increased, if you thinke it will not be of conuenient bignesse, and both these points do consist in diet, in the quantitie & qualitie of the fomentation, & in conuenient medicines. Of medicines those are to be vsed which do moderatly heate, and is made plaisterwise. Among which, the pitched emplaister is not the least of price, for both doth augment the Callus & draweth nourishment to the broken member. This is to be vsed when as we thinke to make the Callus bigger, but if Callus be to big, then you must make it lesse with medicines which doe digest & be astringent. Also with compressing ligature, and a plate of lead applied to the Callus. Also frications & fomentations made with oyle, salt & salt Peter, or w̃ salt water made hot, but if the Callus be

growen to much, & that into a hard & stonie substance, then you must cut the flesh, and with knives and other conuenient instruments, the Callus is to be minished. Also it fortuneth that the Callus doeth not growe at the accustomed time, which commeth of sundry causes, that is to saie, either of immoderate fomentations, or vntimely motion, or through the multitude of rolling, or for that the bodie is not sufficiently nourished, which appeareth, when as the member affected is leaner and slenderer than it was naturallie. Therefore with all diligence you must loke to this thing, applying hot attractiue medicines to that parte, and cause his diet to be more larger, & causing the patient to embrace mirth, and banish heauinesse and such passions of the minde as may bring the bodie into a melancholik disposition. And this shall be the signe and token, that the bones fractured be conglutinated with Callus, when as the rollers and things wrapt about the member do appeare bloudie, no wound being in the member. Which thing I suppose do spring when as the substance of Callus commeth together, and going into the holiow parts of the bones, some droppes of bloud are thrust out. And thus much shall suffice touching the method and waie to cure the bones fractured, now will I speake in like sort of luxations and dislocations.

What a luxation or dislocation is, and of their differences. Chap. 6.

ORder euer requireth, that whatsoeuer anie doe take in hand, that first or he proceedeth further, he do exactlie know the nature of the same, which he cannot do otherwise than by definition & description. Therefore a luxation is the going out of a ioynt from his naturall place, whereby the voluntarie motion of the member is hindered, the Grecians do name this affection Exarthrema. There are two onely differences of luxations, which are taken according to the bignesse of the luxation, for if the ioynt be quite out of his owne & place, then it is properlie called a luxation, but if it be but onelie a little remoued, it is then not named a luxation, but a wrinch, in Latine Subluxatio, and Parathrausis in Greeke. It fortuneth that a ioynt may be [illegible] of

waies dislocated or wrinched, that is to saie, forward, backward, higher & lower, except certain which cannot be put out of their place, or else but one or two of these waies. But for as much as there riseth no great utilitie by numbering of such ioynts, I will leaue off to make mention, & wil intreat of the reducing of ioyntes dislocated into their proper places. And to this there are foure intentions to be obserued. The first to bring the ioynt into his native and prestinate place. The second is, the conseruation and keeping the ioynt so put in, that it doth not slip out againe. The third is, to defend the member from accidents, as dolour, inflamation, flure of humours, and such like. The last scope is, to put awaie those accidents if anie doe follow these in their proper places I will set out, beginning with the first intention.

How the luxated ioynt is to be reduced to his naturall seate and place. Chap. 7.

SEeing that the ioynt dislocated and out of his naturall place requireth the reducing againe of the same into his wonted seate, you shall extend the member into diuerse parts decently, as is required, vntill such time as ỹ space betwixt both bones is emptie and voide. Then the bone which is out of his place is to be put into the contrarie part from ỹ whereas he is so placed in his native seate, that ỹ emptines of the socket may againe be filled with the bone. But this extention and stretching out of the member must be done tenderly, & with so little paine as is possible. Neither is ther one way of extending & stretching out of ỹ luxated mẽber, for somtime it must be done with the hands onlie, somtime with bands, and sometime with instruments apt and conuenient for the same, as appeareth in Hippocrates booke de luxatis & fractis.

How the member luxated and brought in his naturall place, may be conserued and kept in the same. Chap. 8.

WHen as the member luxated is brought into his natural place, you must with al diligẽce possible labor

to confirme the part, & kéepe the member from slipping out againe, wherefore you shall anoint the place with oyle of roses, and then a fine and olde linnen cloth wet also in oile of roses, shal be applied to the member, which done, you shal vse stufes and clothes wet in the white of egges, & lay them also on the ioynt. Last, you shall wet your rollers in water & vineger mixed together, & roll the member therewith. And if necessitie doth require, you may furthermore make splēts of leather or pasted paper, & apply them about the ioynt, but giue diligence least the part be to straight bound & rolled, for feare of inflamation. These things thus finished, lay the member in his naturall figure & shape. Neither shall you, (except some great & ill accident happē) lose the roller & open the member, before the seuenth or tenth daie at the least. Auicen willeth that in this case you shall not vse hot clothes or medicines for feare of flure and inflamation, but rather some refrigeratiue cerote.

How to defend the member from accidents, and to put them āwaie if they happen. Chap. 9.

The member lurated being reduced to his naturall place, and confirmed in the same, and also hauing his perfect shape & figure, there remaineth to defend the same from ill accidents, or if such happen or thou bée called to the cure, to put them awaie. In the defending the member, you shall labour to kéep the member frō flure of humours, for if there be a flure, then shal there follow both dolour & inflamation. Therefore strengthen the member with apt & conuenient medicines set out in diuerse part of the worke. Also let him vse thin and small diet, purging, and letting blood, for these doe meruailouslie auert the flure from the affected member. But if it chance ỹ there is alreadie accidents or thou come to the patient, as dolour or inflamation, then thou shalt not put the member lurated into ỹ place before thou hast cured the accidents. Therfore these things sufficentlie declared as much as the nature of an Enchiridion requireth, touching

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the methodicall curing of wounds, both in similer and instrumentall members, also of fractures and dislocations, I will speake briefely, taken of members, and then cease my penne for this present.

The method & way how to take of a member when it is mortified and dead: & of a new pouder by me deuised, to stay the flux of bloud. Cap. x.

IT happeneth often tymes, that through great accidēts which falleth vnto wounds, thorough gunshot, that the whole member commeth to mortification. So that of necessitie it must be taken away. The same accidents also I haue knowen to chaunce vnto fractured members: and many other wayes it hath happened the members to come to Gangrena and Sphacelus, by diseases of which, you shall finde in other of my workes, a more ample discourse, wher as I intreate properly of those griefes. But for that my whole intention at this present, is onely to set out the way how to take of corrupt and mortified mēbers, I will leaue them, and goe to my purpose.

If the legge chaunce to come to such corruption, beneth the knée, that of necessitie you are constrained to take it of from the other part: It is best to cut it of, one good hande bredth beneath the knée. So shall the partie haue a resting place for a stylt to goe vppon: And although it nédeth no more but to take of his foote onely, yet for as much as the rest of his legge should be but a trouble vnto him. It is better to take it of vnder the knée, as I haue saide before, for the paine will be all one, and the daunger is least in that place. And further you must take diligent hēde, that you make your incision aboue the corrupted parts, for else the flesh or bones being corrupted aboue the place wher as you make your incision might cause you to haue a new work, to the great griefe and paine of the pacient, as I haue sene often times. And therefore if the corruption haue taken the ioynt of the knée, so that it cannot be cured, but that of force

the member must be amputated and cut off, then take it off three fingers aboue the knee. For in any wise take it not off in the iuncter of the knee, for that is very daungerous, and contrarie to the opinions of all the auncient writers: and that order you obserue in taking of the leg, the same shall you follow in taking of the arme. But before you beginne this worke, you ought well to consider with your selfe, and also to call other expert men to you, to see the pacient, conferring with them, whether there be any waye to keepe on the member, & to cure it by any way possible, for it is great slander to the arte of Chirurgerie, and also matter in cõscience, to take away any member, which otherwise might by arte be cured, although it be both paineful and long or it be done. But if ther be no other way but that you are cõstrained to take away the member, or else the partie cannot be cured, and that in processe of time death must follow, then it is better to cut of a leg or arme, then all the whole bodie should perish. Now when you intend to take of a leg or an arme, first prepare the bodie, that is to say, if it be full of ill humours to purge it with cõuenient medicines, and also to giue the pacient such diet before, as is conuenient. That is, if the pacient be feble and weake, and hath bene long sicke, then giue him meates of good nourishmẽt, to make him strõg that he may be the more able to suffer the paine when as he shalbe dismembred, least he faint and fall into souning, and thus doing fiue or sixe daies, you may proced to the taking off of the member, which is done in this maner: first you shall make a defensiue as heareafter followeth.

Rec. Boli armeni. viij. vnces. Farinę hordei. iiij. vnces. Sanguinis draconis, Terræ Sigillatæ. Ana. ij. vnces. Olibani. i. vnce and a halfe. Aceti. iiij. vnces. Albuminis ouorum. q. s.

Make all these in pouder, that are to be made in pouder, and incorporate them with the vineger, and whites of Egges. Then spred this vpon a cloth. iiii. fingers brode, that it may goe two or three times about the member. This defensiue must be layde on so nere about where as you will take of the member, as is possible, so that when you make your incision, you must cut so nye this defensiue, as with-

In the breadth of one straw, or halfe an inch at the furdest. This defensiue must be verie hard rolled about the member, the night before you intend to take it off, and the harder it is rolled, the better it is, for the hard rolling staieth the bloud, and maketh that in taking off the member there commeth no great flux.

And furthermore, by reason of the hard rolling, it letteth both the animall and vitall spirits, to passe to the affected parte, by meanes whereof, it is so astonished, that the pacient feeleth not halfe so much paine, as he should if this were not done. Then when as you come to take of the mẽber, you shall prepare all things readie that serueth for his dressing, and before you make anie incision, put the partie in verie good comfort, declaring vnto him, that the feare is much more then the paine. And if you be disposed to take of anie member without actuall cauterization, you may aptlie doe it, by potentiall Cauterization.

Among which I haue deuised one that by cõtinual proffe I haue found profitable, and therefore I will show the cõposition as followeth.

Rec. Aluminis succarini, Thuris, Arsenici, Ana. ij. vnces.
Calcis viui. vi. vnces.

Make them all in fine pouder, and put vnto them one pint of strong vinger, and boile them on the fire, continuallie stirring it till the vineger be consumed, then let it bee set in an ouen, or in the Sunne, till it be perfectlie drie, that you may make it in pouder, and when you will vse it, take of this pouder iii. ounces, of Bole armoniack, halfe an vnc. of Puluis Alcamisticus, i. ℥. Put all these together, and make them in verie fine pouder, and so you haue the pouder sublimed and prepared to restraine bloud when you will take off a member without hot yrons. And this medicine I haue found to be most sure of all other, not onely in taking off of members, but in manie other griefes cured by the arte of Chirurgerie, and I haue named it in all my Bookes, Puluerem secretum.

And before that you doe make your Incision, take foure ounces of this pouder, and incorporate it with the whites

whites of Egges, then make a stufe of tow, as large as the ende of the member that you wil take of, and dippe it in vi-neger and presse it out againe. Then spred your medicine, made with the pouder & the white of Egges, open the same tow, after strow a little of this drye pouder vppon that, so making many little bolsters of tow, to lay vpon this great stufe, as nede dothe require, for the better restraining the flure of bloud.

Now when you haue all things prepared, with bolsters and rollers, and other things thereto pertaining, you shall goe to the pacient and comfort him, as I haue sayde before, couering his eyes and setting him in some place conueniēt, hauing certaine persons mete for the same purpose, to hold his bodie and his armes, that he let not your operation, and other apt persons to hold the member that you will take away. You shal then quickly and redily with a sharp incision knife, cut the flesh round about to ẏ bone, within half an ynch of the defensiue, that was before layde on. And one thing you must take hede of, there lyeth a nerue betwixt the two bones of the legge beneth the knee, which you must cut a sunder with your incision knife, least that in sawing of the bones, (this being not cut a sunder with your incision knife as I saide before) it might be so plucked and torne with the sawe, prouoking great accidentes, as sincope, spasmus, dolour, yea, and death also, which I my selfe haue often times sene.

Then when you haue made your incision perfect, with a fine sawe you shall cut a sunder the bones spedely, & with as little shaking of the member as you may, then lay vpon the ends of the bones a little lint dipped in oyle of Roses, & so wrong out againe, the oyle being first made warme. And next lay on your stufe prepared, as I haue said before, with your pouder, and the white of Egges, laying vppon that other stufes and bolsters, to restraine bloud, as you see cause: then must you roll it according to arte, to keepe on the stufe verie close, that it may the better restraine bloud. Prouided alwaies, that ye laye a defensiue aboue the knee, to defend that no humours fal downe to ẏ sore place, which

defensiue you shall euery day keepe wet, with vineger and water. So that you shall not neede often to remoue it. In lyke maner you must wet your first defensiue that was laid vnder the knee and so keepe it wet, for the space of fiue or seuen dayes before you remoue it. And for as much as we cannot come to a finger, or a toe to take it of with a saw, as we may doe a legge or an arme, therefore I haue deuised pinsons to nippe the bone a sunder after that you haue cut the flesshe round about to the bone, with your incision knife, vsing your pouder with the white of an Egge, for the restoring of bloud, and other defensiues, to defend humors, as I haue before alleaged.

Now for the rest of the cure, first we must procede with medicines to cause the arker to fall of, and I haue founde none better then this following.

Rec. Terebinthinæ, ij. vnces. Butiri recentis, iiij. vnces. Ceræ one vnce and a halfe. Vnguent. populeon. viij. vnces.

Make hereof an vnguent according to art. This vngent doth not onely lose the arket, but it ceaseth the great paine, and kepeth the member from euill accidents which is requisite in this maner of cure. I haue not knowen two dye, that hath had their legges or armes taken of with this pouder aforesayd, & vsing the methode or way that I haue here before declared. And for the rest of the cure, you may vse medicines incarnatiue and desiccatiue, as you doe vse in other woūds, and as is required in the arte of Chirurgerie. Now my brethren, for as much as that the taking off, of members, is one of the principall things that you haue desired of mee, and to doe it without actual cauterising yrōs, which fore feared the people with the error of cauterizatiō or burning, as we call it, that many of them rather would dye with the member on, then to abide the terrible fire, by meanes whereof, many people perished.

And other some that put themselues to surgerie and had their legges or armes taken of with hot yrons, many of thē perished, as you your selues knoweth right well. And specially you that be of the Hospitalles of London: wherefore I haue deuised and compiled (by the mercifull helpe of

God)

God) this maner and way to cure those miserable afflicted people without any hot yrons or great perill of death, as you your selues haue had experience now of late time, by the dismembring and taking off, of many members, to the great releefe and cõfort of the poore people, and to the great honour of the noble arte of Chirurgerie. And I trust also, being thus maintained, it shalbe highly to ỹ glorie of God & the commendacions of this noble Citie, where as these charitable dedes are done, vnto the poore afflicted members of Iesus Christ, in the Hospitals of London, where as dayly these workes of mercie are done.

Now brethern I haue opened vnto you this noble powder, which I haue inuented to your honour and profit, but chiefely for the commoditie of the poore: requiring you, for as much as it hath bene your owne desire, to haue the making of it, to take it in good part & giue God the chiefe maker thereof, thankes therefore, and vse it well. For I haue hard say of a late time, that there is some that saith, they haue the same powder, and maketh a mocke and a gaude at it, going about to deface me the author thereof, for my good will and painefull diligence. But I warne thee (what so euer thou art that so saith) to hold thy tongue with shame, for neither thou nor I had it, but now of late time, inuented by me and one Maister Pierpont, and first put it in vse, and practise by the Surgions of Saint Thomas Hospitall in Southwarke. And since that time put in vse of many moe, both young and olde, not onely in taking of members, but in restraining of bloud, bothe in veines and arteries, which could not be done with hot yrons, and many other things hath bene done with this powder, which is more to be meruailed at, then to be beleeued. And I for my part haue read no small number of authors, and that of the best, and yet I neuer could finde this powder in any of them all. And if any other man be able to show it mee in any other author, then I will giue him place, or else holde thy tongue, as I haue said before, for if thou or any of vs all had had this powder, we had showed our selues euel members in a common wealth, that would suffer so many poore people to pe-

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rily in the Hospitals, and in many other places, for lacke of helpe.

And thus brethern to certifie your request, I haue finished this Chapter, and ended my booke called the Enchiridion, or a short and briefe maner of curing, as we call it, of woundes, fractures, and dislocations, &c. But for as much as the medicines therein contained, are put in the Latine tongue, peraduenture you will meruaile therat. Seing that the rest is in the English tongue. But to you my brethren that exercileth the noble art of Chirurgerie, I aunswere, I truth I haue done it both for your commoditie, and also for your profit.

There are two speciall causes why they are put in the Latine tongue, the firste cause is, for that we cannot aptly giue all those simples English names, and therefore for as much as herbes and other simples, are called by diuers names, according to the vse of the country in our English tongue, that they grow in: therefore if I should haue put them in any of these Englishes abouesaid, an other parte of our countrie should not haue vnderstode it. And furthermore if I should haue put part in English and part in Latine, it should haue bene a defacing of all the whole composition of medicines. The secony cause is, that I haue done it for your commoditie, for it shall cause you to vnderstande your receits or medicines in the Latine tongue, not onely by vse of compositions, but the simples also, for there is no medicine set forth in this booke, but if ye goe to any Potecarie, he will make it you presently, and declare vnto you euerie simple thereof, which shall cause thee in short time, if thou be diligent, to vnderstand the whole scope in making of medicines out of any Author in the Latine tongue. And for you my brethren in London, this shall be to you a more commoditie, for it may moue you euerie lecture day, to put a question for one medicine. So that within short time, you shall gather the whole knowledge, both of simples and compounds, and also apte termes pertaining to the arte of Chirurgerie, in the Latine tongue, in which the most part of the arte is written.

And

And hereafter if God spare me life, and this my simple wo2kes taken in good parte, I shall not cease, but set fo2th vnto you one Herball, with the true pictures of herbes and trées, with manie other simples appertaining to the arte of Chirurgerie, with so many names, as well in English as in all other tongues that I can learne o2 vnderstād, with their vertues, p2operties, & places where they grow in. &c. Which booke may be such a doctrine, that you shall in sho2t time vnderstand all these simples conteined in this booke, and manie moe, not onelie their qualities, but all their hidden p2operties which hath bene found out by long experience. And although this little booke named the Enchiridion, is verie b2iefe and sho2t, yet shall you finde therein cōtained, a true and right methode of curing, acco2ding to bothe olde and new w2ikers, with the whole scope and intentiōs curatiue, how to apply our medicines, when to apply them, to what place they ought to be applyed, and at what time. And although many Surgions haue good medicines that may serue fo2 the lyke purposes, of these that I haue made mencion of befo2e, yet notwithstanding fo2 an example I haue set fo2th these, that ye may the better vnderstand the true methode and way of curing, by the nature and operation of them.

Thus I take my leaue of you deare b2etheren in Iesus Chr2ist, wishing vnto you the perfect knowledge of this noble arte, which is onely the gift of the holy Ghost, and you wel to vse it, that almightie God may wo2ke with you to the cōfo2t of the diseased o2 hurt persons: let vs all p2ay, Lo2d increase our knowledge, in all vertuous Artes and Science, that we may vse thē, to the glo2y of God, to whom be all honour and p2aise wo2ld without ende. Amen.

¶ Thus endeth the fourth and last booke of the Enchiridion of Chirurgery, compiled by Thomas Gale Maister in Chirurgerie.

FINIS.

An excellent Treatise of

Wounds made with Gunshot, in which is confuted both the grose errour of Hierome Brunswicke, Iohn Vigo, Alfonce Ferrius, and others, in that they make the wound venimous which commeth through the common pouder & shot. And also there is set out a perfect and true methode of curing these Woundes. Newlie compiled and published by Thomas Gale, Maister in Chirurgerie.

MIcrocosmos (whom Man we call)
of two right noble parts is made:
The Soule, whose life is eternall,
and bodie eke which hence must vade.

This last part, doth the first containe,
so long as it in health indure:
Vntill sickneſſe and all her traine,
doth proclaime warre, and death procure.

Now sickneſſe quite for to expell,
Apollo hath the arte out set:
What arte loe Maister Gale doth tell,
whereby sickneſſe force we may let.

The Canon shot (dreadfull and fell
like thunder bolts and firie flame)
How to remoue the waie, he tell
in this Treatise of worthie fame.

His name of right, Gale we may call,
for Gala, Milke doth signifie:
And as milke nourish aboue all,
so doth this Gale right perfectly.

His sugered milke of learning sweete,
doth the minde foster and feede:
Shewing the waie that is most meete,
Microcosmos to helpe at neede.

Now, what reward for him is due,
that for mans cause doth such things shew:
The wounded man shall be iudge true,
and learned heads which it doth know.

Iohn Field Chirurgion.

Thomas Gale Maister in Chirurgerie, vnto the friendlie Readers.

I Am not ignorant (friendlie reader, but many, yea, ỹ greater sort, will not a little meruaile, that I should go about to ouerthrow that, which for a manifest truth, of no small time hath bene receiued and imbraced, yea, and not onelie receiued, but also with the pens of diuerse (otherwise well learned) confirmed and established. Ye thinkes I heare them saie, What kinde of fellowe is this? What a Paradoxe hath he published? Is his knowledge and experience passing those famous writers ỹ haue left so noble workes behind them? To all which I answere, that the mattier must be tried, iudged, and determined, not by antiquitie onelie, nor by authoritie, but by reason and truth. And yet I will attribute as much to their authorities as some other wil, knowing my selfe far vnable to match with anie of thẽ. And also they be such as I haue profited by, yet the truth is to be preferred before their authorities. Wherefore I beseech thee louing Reader, not to condemne mẽ before thou hast read my worke, and waied the force of my arguments, wherewith I do maintaine my

my assertion, and conferre them indifferentlie with my aduersaries, and let the touchstone be Ratio et Experientia, so I doe not mistrust, but at the length this my opinion shall not seeme so straunge and new, as true and worthie to bee receiued of other. Thus I bid thee well to fare, and fauour my trauailes (which for thy sake I take in hand) as I wish thy knowledge in this my profession. At my house in London the 26. daie of Julie. Anno 1586.

The Proposition or Thema.

The vsuall Gun-pouder is not venimous, neither the shot of such hotnesse as is able to warme the flesh, much lesse to make an eskar. Chap. I.

BEfore I doe anie thing intreate of the cure of these wounds with Gunne shot, I will somewhat search out the nature of the vsuall pouder and shot, whome many Chirurgions (otherwise learned) haue affirmed to be venimous, & so consequentlie the wound made with that pouder and shot, to haue the cure of venimed wounds. And heere I would no man should iudge that I denie there may be Gun pouder venimous, but my talke shall not further extend than to the vsuall Pouder made of Sulphure, Saltpeter, & Coale. And that the thing following may bee the more euident and plaine, it is requisite to consider what that is which is called venime, what the vsuall Gunne pouder is, and what the shot driuen violentlie forth with the Pouder can doe.

As touching the first, what venime or poison should bee, (which is called in Latine Venenum, and in Greeke Pharmacon, it is no other thing than Res non naturalis, a thing

not naturall, which being applied to mans bodie anie kind of waie, either inwardlie or outwardlie, through his maligne qualitie, propertie, or both, doth corrupt and destroie the same. Now then seing you knowe what venim is, let vs diligentlie consider whether the vsuall Gunne pouder doth aunswere to this definition, if not, then certainly it is not venimous, as diuerse persons haue hetherto dreamed. And for because it is compounded of simples (Sulphure, Saltpæter, & coale) it is requisite to set out what these thræ are, for so shall we the more assuredlie coniecture what the compound is, and whether it be venimous or not. And herein for the perfect knowledge of these simples, we will resort onely to the authorities of Dioscorides and Galen, the principall writers of this matter, least in rehearsing all the authorities of those which write of the nature of simples, the worke might growe greater than I haue determined. Then if these writers fauour our opinion, wæ will further wade and consider what daylie experience sayth hereto, or whether that there result a venime, the simples bæing inired, or else that through alteration in time of the shotte, it tourneth to venime. I thinke these bæ the principall argumentes they haue to maintaine their fond fantastic.

And now touching the authoritie of the auncient writers, I will beginne with Dioscorides, who in his fift booke lxxxiii. Chapter, writeth of Sulphure in this manner. Sulphure viue is thought the best, which is called Apyron, shining lyke a glowe wourme, and nothing stonie. And in generall, that Sulphure is allowed which hath not tasted of fire, waxing græne and fat. There is greate store of it growing in Melo and Lipara. The forsayde Sulphure doth heate, dissolue, and concoct spædelie. It is good against the cough, short breath, and purulent excretion, taken in an Egge, or vsing the fume of it. And the sauour of the same burnt, bringeth out the childe in birth time: it doeth take awaie Lepzie, Pentagra, and Scabzos vngues, mired with Turpentine: but tempered with Vineger it is of force against the Lepzie, and taketh awaie Vitiliginem, it healeth

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the sting of the Scorpion, Resine being put to it. And with vineger it is good both against the woundes of Draconis Marini, and also of the Scorpion, with salt Peter it taketh awaie the itching of the bodie, it helpeth the Jandies sprinkled on his forehead, or else taken in a rere Egge, it profiteth much in distillation, and stayeth sweating, with water and salt Peter it is good for those which haue the gout, the member being washed in the same. It helpeth the thicknesse or rather difficultie of hearing, ỳ fume of it being receiued by some hollowe pipe: it raiseth those which are called Lethargos, it stayeth the flure of bloud. Bruised Eares being annointed with it, mixed with Wine and Honie, are by it cured. These be the wordes of Dioscorides touching Sulphure. His minde in effect concerning Saltpeter, in the fift booke, lxxxix. Chapter are these. Nitrum is ỳ best which is light, of rose or white colour, full of holes like to a Spunge, such is brought from Bunys. It bringeth out humours fixed in the deepe partes. The spume of Nitre is iudged best, which is most light, friable, in coulour almost Purple, or spumous and biting, such is brought out of Philadelphia in Lidia. The second of Aegypt. Also in Magnesia. Both Nitrum and eake his spume, hath the strength and vstion of Salt.

Furthermore, Nitrum helpeth ỳ Collike if it bee taken with Cummin in Hydromell, or new Wine boiled, or anie thing which doth losen winde, as Rue or Dill. It is also vsed in Feauers, to annoint them before the fitte suspected. It is mixed with emplaysters, which doe extract and dissolue, it doeth extenuate and put awaie the Lepzie, with warme water or Wine, it doth awaie the noise of the eares, inflations, and perulentnesse, the filthinesse of the same it doth purge and cleanse, tempered with Vineger instilled and put in, it helpeth the biting of Dogges put with the grease of an Asse or Swine, it doeth open Felons mixed with Resine, Terebentine, and in the Dropsie, rubbing the skinne with a Figge, it causeth clerenesse of sight tempered with Honie, and the venime of Mushrumpes beinge drunke with Posca, or else with water, if they haue bene

bitten with Vipers is. Also to those which haue drunke Bulls bloud with Laserpitium, and it is to bee giuen also to them which cannot taste their meat. It is vsed also in Opisthotinis remissionibus et luxatis cum cerato, and in resolution of the tongue mixed with bread. Some doe burne it on the coales, putting vnder a new tesse or pot vntill it ware red hot. Thus much also out of Dioscorides touching Nitrũ. Now let vs heare Galen, who speaketh of Sulphure in this manner.

All kindes of Sulphure (saith he) hath a power attractiue, and is of hot temperament, and of subtill substaunce, insomuch as it resisteth ỹ poison of many venimous beasts, for I oftentimes vsed it against the venime of Turtur marinus and Draco. And when I had taught it certaine Fishermen, I after a short time returning, they meruailously commended this medicine to mee. The vse of it is, that being dried, strowed on the wound, and also tempered with spittle, for when I had excogitated these things, I found thẽ true by experience. In like sort it serueth being mixed with vine, for I taught the Fishers such medicines as might readilie be prepared, and I saide they might aptlie vse it both with olde Oyle and Honie, and Turpentine, and surelie experience shewed all these so to be. Also I haue not a fewe times (with this medicine of Sulphure mixed with Turpentine) healed Scabs, Pentagra, and Lepzie, for it cleanseth all such diseases, and doeth not repell them into the inward parts, whereas diuerse other medicines which cureth these sicknesses haue a mixed propertie, that is to saie, they doe both digest and also driue backe. Hetherto Galen of Sulphure.

Now let vs heare him of Nitrum, called with vs vsuallie Saltpeter. Nitrum (sayth he) is in a meane in strength, betwixt Aphronitrum and Salt, but beeing combust, it goeth neerer the nature of Aphronitrum, for by vstion it is made of more subtill and thin partes. Therefore it doth dry and digest. And if it be taken inwardlie, it doth cut and extenuate grose and slimie humours, much more than Salt: Aphronitrum, except great necessitie inforceth, is not to bee

taken

taken inwardlie, because it hurteth the stomacke, and doeth extenuate more than Nitrum. Trulie a certaine rusticall man used Nitrum as a remedie against suffocation or choaking, when anie had eaten Mushrumpes (they call them in Latine Fungos) and it euer profited him. And I my selfe haue accustomed to vse Nitrum both combust an crude, and chieflie the spume of it in the like effects. Thus much out of Galen also, touching the qualities of Nitrum.

The like words both of Sulphure & Nitrum hath Aetius well nere. Now by their authorities you may easilie iudge that neither of these two are corrupters of mannes bodie, either inwardlie taken, or else outwardlie applied. So that they nothing agree with the definition of venime. Yea Dioscorides, Galen, and Aetius, found Sulphure and Nitrum so farre from anie venimous qualitie, that they vsed them as approued and excellent medicines against venime. Therefore neither Iohn de Vigo, Alphonce, nor Brunswicke, shall be able by anie approued author, olde or new, to proue that the Simples (entering into the composition of the vsuall pouder,) are venimous, except they will affirme the Coale to bee venime, which were ridiculous, seeing that women with childe, or those which labour with that sickenesse which is called Pica, and also children dailie eate Coales without daunger.

Furthermore, dailie experience sheweth the vse of Sulphure to be profitable. For it is a common practise, to giue it in milke to children vexed with wormes. And as for gunpouder it selfe, in defect of other medicines, I haue put of it in these wounds, to drie and excicate, to the great comfort of the patient. And therefore it is not in mixture and composition venimous, but medicinable, and hath in him the vertues abstersiue and dessicatiue. Neither in those that are wounded with shot of this pouder doe you see anie of those accidents to followe, which are as inseperable in venimous shot. Although Alphonsus Ferrius woulde that putrefaction, corrosion, vlceration, and corruption, shoulde bee the proper accidents in venimous wounds. As who shoulde

saie, that perspiration letted of hotte and moyst humours, there followed not putrefaction, or that there appeared not in vlcers corrosion, called therof Vlcera Phagedenica. Now aptlie therefore doth he applie these as proper accidents in venimed woundes, when they are found in more than an hundered diseases, I doe make himselfe iudge. Furthermore, the cure it selfe of these woundes, agræth with those that bée contused and bruised, without the addition of anie medicine or Aleripharmacon against venim, yea, † Alfonsus himselfe did little consider his assertion, when in the curation of woundes made with Gunne shot, hée forgetteth to vse remedies against venime, which shoulde bée his chiefe and first scope, if the wound were as he affirmeth. So that it is more cleere than middaie, that the ponder doeth not receiue anie venime through the fire in shoting, and that also it is euident in those that are burnt with Pouder, for there appeareth no mention of venim in them. And the burning is easilie cured, and that with light medicines. Another argument that Alfonse bringeth is, that the compound medicine commeth to the fourth degrée in heate, and therefore is venimous, and so consequentlie the shotte, and therefore the wound with it made. But let vs sée I praie you the force of this argument: Sulphure is hot in the fourth degrée, and Saltpeter hot in the end of the second degrée. Now in the composition there is put one part of Sulphure, ten partes of Saltpeter, and one parte of coale, the coale is colde and drie, and therefore addeth not heate to the composition, neither the ten partes of Nitrum, bæing but in the second degrée hot. Howe then shoulde this pouder bée hot in the fourth degrée? As for the like example, if you put to one part of boiling water, ten parts of water but halfe so hotte, will it abate the heate of the one parte, or make it greater? I suppose none is so rude to confesse that it will increase the hotnesse of the one part. But in the waie of disputation I will graunt this absurditie. What then? Will hée conclude all things that are in the fourth degrée hotte, to bée therefore venimous? Then surelie hotte yron,

fire,

fire, burning coles, Pepper, Pellitorie, and a great number of healthfull simples, should be numbred among venomes. True it is that venomes are deadly in themselues. But it doth not therefore follow, that what so is deadly, that same is also venemous, this is no true conuersion. But leauing this as a thing to manifest, to make more wordes of: we will consider whether the shot receiue such heat, that it can make an alker in the wound, as they affirme. Surely, I in the warres, haue asked diuers wounded Souldiers, what heate they perceiued in the time of the pearcing of the shot: Who all aunswered, they felt no heate, but a certaine contusion, and I my selfe haue presently taken vp the Pellet when it hath laine at the marke, and felt no heat at all to be made accompt of. But that you shall perfectly vnderstād and be Iudge your selfe in this case. Hang a bagge full of Gonpouder on a place cōuenient, and stand so far of as your pece will shote leauel, and shote at the same, and you shal see the Gunpouder to be no more set on fier with the heate of the stone, then if you cast a cold stone at it. But say they, how happeneth it thē that there is an alker in such woūds: For there is neuer alker but commeth of cauterization, either actuall or potentiall. To this I aunswere, that it is no alker, for then it were not possible there should be flure of bloud in these wounds. For Galen saith, things adurent and burning, doth stay and staunch bloud.

But you will reply and saye, there commeth no great flure of bloud: to which I aunswere, the cause of that is, the great contusion which repelleth the bloud, and hath so dryed the part wounded, in thrusting the bloud to the other parts that there is the lesse flure. But this is most euident, that there euer followeth flure more or lesse: and therefore it is no alker but contused flesh.

This might also be a reason manifest to the sences, that if the pellet be a cauterise (which of force it must be, if it doe make an alker) how happeneth it, that it burneth not garments when it perseth them first, and then the bodie? May you shall neither see, neither smell any token of adustition or burning: where as if the shot had no more heate then a

little sparke of fire, it should in lyke case easely burne the garments.

But I think these arguments sufficient. Therefore seeing that neither by authoritie of any learned author, neither by experience, neither yet in composition and mixture, and to conclude, neither in the shoting the vsual gũpouder is found to haue any venemous qualitie, or the shotte any such heate as is able to make an askar: Let them cease (I pray them) henceforth, their fond opinion, & not obstinately persist in their errour conceiued, seeing that the sences doth otherwise iudge: and not be ashamed to imbrace a truth, & from henceforth confesse the vsuall pouder not venemous, nor the shotte of such heate that can make an asker. Which if they doe, they shall not be tormented with such care to take the fire (as they commonly call it) out of the wound. But considering that this wound made with gunshot, is to be numbred not among grene wounds, not amõg venemous, but onely among those which are called contused, bruised, or crushed woũds: They shall with great gaine to the wounded man, and much profit and fame to them selues, haue as prosperous successe in their cures, as some of them haue susteined shame and reproch. But now to the generall cure of those wounds made with gunshot.

The generall methode and way to heale such wounds as are made with gunshot. Cap. ii.

NOw seeing (as I suppose) I haue sufficiently proued, neither the shot or pouder to be venemous, it is conuenient to show the methodicall cure of these kindes of wounds. And there are two intentions properly hereto belonging. The one is to deliuer the wound of all such things as are not agreeing to nature. The other is restoring of such things as are lost and perished. I call thinges not agreeing with nature, not onely shot, yron, splintes, or shiuers of wood, cloth, dust, oyle, or such lyke: But also the cloddes of bloud, mattier, broised flesh, and such lyke as haue no so-

no societie with nature. The way how and in what sorte these thinges are to be remoued, you shall finde in the fifth Chapter of the first booke of my Enchiridion. The restoring of that which is lost, is properly the office of nature, as to ingender flesh, bloud, and such lyke partes as are to be engendred. Notwithstanding the Chirurgion herein is Natures minister, and shall labour to bring the parte to his right temperature: And it so reduced to conserue it in the same estate.

And although in the sixte Chapter of my Enchiridion, I haue showed a generall Methode of curinge contused wounds: yet I will not refuse for the helpe of the inexpert, to set out in this place a more ample and large maner and way of working.

Therefore the cure of these kinde of woundes, is to remoue thinges fixed in the woundes with instrumentes thereto conuenient. As Crow billes, Goose billes, Terri-billes, Nippers, or Tonges. And then to doe your indeuour to cure this wounde, as you would doe contused and broised wounds.

And for because the broised flesshe must of force be taken awaye, and that with so much expedition as you conueniently may, without sharpe and byting medicines: Therefore you shall to this wound contused take, of Precipitate Mercurie Dragme. j Or according as you shal see cause, and mixe it with simple oyle, or oyle of Roses, or with butter, or freshe Barowes grease, and laye it to the contused places.

Bartholomeus Maggius an excellent Chirurgiõ, in these wounds, after the thinges fixed in, be remoued, the flure of bloud stayed, and the wounde cleansed, vseth to put into the wound, of his oyle one drop, vnto which oyle he geueth great commendation, in all contused woundes, and the discription of it is as followeth.

Rec. Resinæ abiectinæ. v. vnces.
Olei Rosacei. ij. vnces.
Sem. Hyppericonis. v. dragmes.
Sem. Momordicæ. iij. dragmes.

The

The seedes shall be brused, and put in a double vessell, with the oyles, and let them boyle halfe an houre. Then straine them, and keepe them to thy vse. This oyle doth asswage dolour and paine, it doth concoct and digest, and preserueth the sound flesh from corruption and putrifaction. There are also other medicines apt and cõuenient for these wounds, but I will repeate one which is singuler, and as I might tearme it merueilous: for it separateth the contused swelling, and putrified flesh, and that without dolor or paine. And furthermore, it so concocteth and digesteth, that you shall not perceiue any kinde of cruditie in the woũd, & this medicine is called Vnguentum Egiptiacum.

Wherefore I wish that the Surgion doeth both dipps his tents therein, and also lay it on his splegeants. For in two daies or three at the most, yea, in great cõtused woũds, it worketh his effect. And here by the way, I must put the Surgiõ in memorie, that his tents be not to bigge or long, that they be not rough and hard, for the bigge tent doth extend the member, the long doth pricke and induce dolour: the hard and rough, doth as it were teare the flesh.

Let the tentes and splegeantes therefore be made of olde and fine linnen cloth, that it bringeth not paine to the affected part. After the contused flesh is remoued by the vse of your Egiptiacum, then apply to the place things that wil mundifie, and moderately drye, as Honey of Roses tempered with the flower of Barley meale, or Beane flower, vnto which you may adde, Aristolochia rotunda, Centaurium minus, Euphorbium, Aloes, Turpentine, Frankensence, Plantaine in pouder, or iuyce, flowers of Pomgranade, Cipresse nuts, and such lyke, according as the nature of the part, and time of the yeare doth require. And here I speake not either of purging, letting of bloud, scarifying, & boring, more then to admonish them, that these are necessarie, & must of force be vsed in these woũds: bicause I would the Surgiõ should not rashly attempt herein any thing, for the great peril that may follow: but rather vse the discrete coũsel of the learned Phisition.

Neither in those wounds which are great, and perilous

with

shot, I would haue them straight waies to dismember the pacient (as many rash Emperickes now in these daies vse to doe) except Sphacelous or Gangrena, haue vtterly mortified the part. For I my selfe haue cured a certaine Souldiour who was shot with a base, through the thighe: there was more then three fingers breadth taken awaye of the bone in length, with the shotte, and yet (God be thanked) through diligence and paine, the pacient was restored to health; and hath the perfect vse of the legge, without any paine or griefe, more then that it is shorter then the other. And thus much touching wounds of Goūshot in generall. The rest where as the particuler cure varieth from the generall methode set out according to the part wounded, you shall haue in their proper places following.

Of a simple wound in the head, made with Gounshot. Cap. iij.

IN wounds made in the head with Gunshot, you shall diligently consider whether the wounde be simple or that it be compound. For according to their diuersitie, the intentions curatiue doe much varie and change.
And for bicause there may be these two kindes of woūds, I will seuerallye of them entreate, beginning with a simple wound first. Therefore if the wound be simple, the cure is easier, and without daūger: If that the pacient haue not a bodie replete with euill iuse, or haue tasted of that contagion, which Maister Doctour Cuningham, in my iudgemēt, doth of all other most aptly giue to name, Chameleontiasis (vulgarlie it is called Morbus Gallicus) as appeareth by his booke written on the same. In which he showeth the errors of such as haue hetherto hereof written: and setteth out a most perfect methode & new way of curing, without fumes, Guaicum, vnguents receiuing into their composition Hydrargyron, or such lyke. But now to that from whence we are digressed.

If the bodie of the wounded pacient be affected as is aforsaide, although the wound be but small and simple, yet

most

most trifling woundes in such bodies are not cured without much diligence. Wherefore in such bodies you must labour to purge the ill iuse, or in Chamęleontiasi, both to let blood, purge, and sweate, and by dyet, and things conuenient rectifie the bodie and principall members of the same. So shall the cure of the wound be more spedie, and also prosperous. But now to the true cure of such woundes as are called simple. First let the haire be shaued round about, after apply this vnguent following.

Rec. Prȩcipitati optimi. ij. dragmes. Butiri salis experti, Olei Rosarum. Ana dragme. j. se. Croci. ij. graines.

Mire these and make an vnguent, which you shall laye on your splegeants being made of soft linnen cloth, and apply it to the wound.

Then you shall laye on the wound also Bolus armenius, tempered with oyle of Roses and the white of an Egge, lyke an vnguent, to defend the part from accidents. And this shall suffice for the first daye. You may also at the beginning, vse in steade of the seconde vnguent, this comfortable Cataplasme following.

Rec. Oleorum myrtillorum, Rosarum. Ana. ij. vnces. Baulaustiarum, Rosarum rub. Ana. j. vnce. Boli armeni, Sanguinis draconis, Ana. j. dragme. Myrrhæ halfe a dragme.

Make of all this a Cataplasme according to arte. The second daye, you shall vse some medicine that bothe doeth digest, and also moderately drye the wound, of which sort this is one.

Rec. Terebenthinæ lotæ, one vnce. Mells Rosarum, two vnces. Butyri salis experti, three dragmes. Farinæ hordei, Aristolochiæ rotundæ, Radicis ireos. Ana. j. dragme. Aloes, halfe a dragme.

Mire these and make all in an vnguent, and vse this vntill such time as there appeare signes of concoction in the wound, at which time you shall no more vse butter in the vnguent, but in steade thereof, mixe with it this pouder following.

Rec. Sarcocollæ. j. dragme. Corticum Radicis papaueris, halfe a dragme. Farinæ orobi, Myrrhæ. Ana. dragme. j. semis.

Make

Make this in pouder, and temper it with the other vnguent. And vse this vntill the wound be perfectly cured. And this is the cure of a simple wound in the head.

Of wounds compound, which chaunce in the heath through shot. Cap. iiij.

IN the cure of compound woũds of the head, you must first of all (bicause you may the surer iudge and discerne) vse incision and make Cranium bare: the forme of cutting most apt, is to make it in forme of two right lines crossing themselues in the middest.

After which incision made, you must with some instrument sharpe and flat, rayse the skinne and flesh from Cranium.

And if you sée any shot or péece of bone, which may easely be taken out: you may doe it with some conuenient instrument.

But if it will not without difficultie be taken away, then wet your stuphs in astringent wine and vineger mixed with Bole armoniake, and Sanguinis draconis: and lay it to the wound. The next day following you shall vse this receit next insuing foure or fiue dayes, for feare of inflammation to follow.

Rec. Boli armeni. ij. vnces. Albumenu ouorum. 2. Olei Rosacei omphacitis. iij. vnces. Croci. iij. graines. misce.

Then you may very well vse this digestiue following, so long as shall be thought conuenient, and that vntil the thing fired will easely be taken out.

Rec. Terebinthinæ lotæ in vino. iij. vnces. Ouorum vitella, nu. ij. Olei Rosati. ij. vnces. Aloes. ij. scruples. Croci. iiij. graines misce.

In other things the cure of it doth not differ from the cure of simple wounds. But if any veine vnder Cranium be broken, and maketh effusion of bloud: If Dura mater, or Pia mater, be rent or torne, if Cranium be broken & thereby ỹ brayne is depressed, then you must with all expedition

set

set a trappan on Cranium, and giue the wounde vent, and take out the blood or mattier, or what else, doth trouble and depresse the braine.

And for bicause you may know perfectly, whether the brayne is hurte or not, (although your sences outwardly cannot discerne any thing) note these signes following. If he haue vertiginem, or thinketh he seth manie lights, if he haue alienation of minde, or swelling and tumour of the eyes with rednesse, or bléding at the nostrelles or eares, also vomiting, resolution of some one parte, and Appoplerie. These be infallible signes that the braines suffer, when as they consequently follow after the head be wounded. And when you are constrained to vse a trappan, you shall make tentes of Cotton, Wolle, or lint, and put into his eares, and commaund a man to compresse with his hands the pacients eares, least the noyse make him to much afraide, and faint hearted. And loke that you haue alway in readinesse, softe and fine clothes, wherewith you may mũdifie Cranium, and wype away the blood.

Then loke you haue a péce of silke or sendal, aunswering to the opening of Cranium, well wet in auster & stipticke wine, or in oyle of Roses, if there doth appeare any cloddes of blood to lye vpon the pannicles, and put this silk vpon the pannicle, & with an instrument put it vnder Cranium. Then put stuphes made of the finest carded woll you can get, and wet them in oyle of Roses, and lay them on the place. After that, fill the rest of the woũd with clothes dipt in the same wine and oyle, then with your hands thrust it out, & lay vpon the same cloth, Bole armoniake mixed with the white of an Egge, and apply it vpon the same wound, and for to defend the member from dolour and inflammation, you shall laye round about the wound this medicine made of Mel rosaceum, Farina hordei, and Iris. And when the hole made in Cranium doth beginne to be filled with flesh, then with a raspatorie, take away the sharpe edges of the bones, and bring the lips of the wound by little and little into their proper places.

And if through the negligence of the Chirurgion, or the

ill habite and disposition of the patients bodie, or anie distemperature, there followeth corruption to anie part affected of the braine, then you must againe returne to the vse of precipitate, or Vnguentum Egyptiacum, which is most excellent in this case. And euer after the doctrine of Hippocrates and Galen, bée mindfull that thou worke softly, spédelie, and with so little paines to the patient as possible you may. Wherefore handle the partes tenderlie, and wipe all filthie mattier awaie. Let the rollinges onelie serue for to kéepe on the medicines, wherefore let them not be too strait, and so to prouoke paine. Let the bellie be fluxible and lose by clisters, suppositories, or purgatiõ, if ỹ it be not naturally solubie. And in this case you may giue the wounded patient euerie daie, or else euerie second daie, one pill of Agarike or Aloes. The diet must bée most small and slender from the time of the receiuing the wounde, vntill the seauenth daie. The meats shall be the broths made with a Chicken, the drinke shall be water boiled with Suger, and a little Cinamon, or else small Ale & Béere. From the xi. or xiiii. daie you may giue him at meate a little French wine, or if the wine be too strong, mixe it with fountaine water, or water of Bugloss and Borage, his broths made as before, with chickens or Capon, and you maye thicken the broth with bread, with Almonds, or such like things that doe nourish. Notwithstanding let all be done with great discretion, and that the patient obserue his due houres of dinner & supper. Other things required for the order of 6. rerum non nat. Let the Chirurgion learne of the skilfull Phisition.

Of wounds in the brest. Chap. 5.

ALthough the wounds made with Gun shot are in all partes of the bodie one in effect and griefe, yet doth the cure differ according to the place wounded. Which thing prouoketh mée to describe héere also the seuerall cure of woundes made in the breast. Wherefore if the wound in the breast pearceth not through, you shall cure it lyke other woundes. And the first two daies applie Vnguen-

tum ex præcipitato, or some other which hath the like faculty. And after that vse some medicines which will gentlie cricate and mundifie, as Mel rosarum simplex, or else mixed with Turpentine, Aristolochia, Farina hordei, and such like. And it shall bee right good from the second daie vnto the fourth or fifth daie to put to your abstersiue medicines fresh and new Butter. So you may make your compound after this manner.

Rec. Mellis rosarum, j. ounce, Terebinthinæ, Butyri recentis, ana. ij. drams, Farinæ hordei, Aristol. rotundæ, ana. j. dram. Mixe these together, and dip your tents and splegeants in them. But vpon the wound you shall vse to laie this medicine following.

Rec. Albumi vnius oui. Olei rosati, j. ounce, Boli armeni, j. ounce and a halfe, Misce.

But when as that mattier doth begin to appeare in the wound, then in the stead of this last remembred, you shall vse Emplastrum ex Chacitide, vel Triapharmacon, made of Oxeleum and Argenti Spuma, spread on a linnen cloth, and layed on the wound, and when the wound is cleansed from superfluous humiditie, you shall cure the wound like those whereas wanteth some generation of flesh, wherefore for this intention dip your splegeãts in this medicine, to whose composition is required.

Rec. Succi Myriophylli, Mellis rosati, Terebinthinæ, ana, one ounce, Farinæ fabarum, Hordei, ana, two dragmes and a halfe, Thuris, Aloes, Aristolochiæ rotundæ, ana, one dragme.

Mixe them together, and with a slice stirre these on the fire, vntill they bee well incorporated, and reserue it to thy vse. Now if the pellet or shotte haue pearced the inwarde partes, it is deadlie and mortall, both for breaking some bones in the breast or ribbes (for the pellet cannot pearce betwixt the ribbes without breaking of some of them, except the shot bee small like haile shot,) and also for pearcing the inward partes. Notwithstanding where the pellet or shot moueth in the capacitie of the breast, you shall with a Probe handsomelie bent for the vse, search where it is, and

it béing found, bring it vp to the orifice of the wound, and then with your Forcepes take it out, as also the bloud. This béing done, you shal vse this vnguent following two daies onelie.

Rec. Olei rosati omphacitis, iij. dragmes, Terebinthinæ, j. dragme, Pulueris præcipitati, iiij. scruples.

Mixe all these well together, and dip your tent in it. But héere you must take héed that the tent be made of most fine and soft linnen cloth, and that the length of the tent be no more than the thickneſſe of the ribbes, neither the bigneſſe more than serueth the orifice of the wound. And vppon the wound you shall applie in manner of an Emplaister Bole armoniacke, the white of an egge, and oyle of Roses, vntill there appeare concoction in the wound, at which time you shall no more vse it, but in the place thereof you shall vse Emplastrum Barbarum, or else ex Chalcitide, whose compositions you shall finde in my Antidotarie. After the second daie you shall vse this vnguent.

Rec. Butyri recentis, ij dragmes, Mellis rosati, halfe an vnce, Glutinis albotin, iij. dragmes, Aloes, Farinæ hordei, Fulireos, ana, j. dragme, Misce.

When as you haue vsed this medicine the space of eight daies, you shall leaue out the Butter, and in place thereof double the quantitie of Honie, and you may make an iniection to mundifie the breast with water, in which is boiled Liquorice, Figges, Raisons, and the lesse Centaurie, or Lupines. The rest of the cure of these wounds doe not differ from the methode sette out in the second booke of my Enchiridion.

Of wounds with shot made in the third ventricle or bellie. Chap. 6.

THE wounds made with Gunne shot, if they be onelie about the bellie or flankes, without pearcing thorough, and hurting the spine of the backe, are cured as other simple wounds made in the flesh. First taking out the shot, then to remoue the bruised and contused flesh with

medicines conuenient, as you see set out in the curing of wounds of the head and breast. Then the third daie to vse some abstersiues, which also do somewhat exiccate and drie. But if the shot haue pearced through the bellie, and haue wounded either the stomacke, liuer, splene, kidneis, intestines, bladder, or anie of the greate veines or arteries, then there is no hope of life to be loked for. But if the shot haue pearced the bellie, and yet not wounded anie of the forenamed members, then the shot being taken out, there is some hope of recouerie, but yet the patient is not free from perill and daunger. Therfore you shall labour to get out the shot, placing the patient vpon the wound, and roll him from part to part, prouoking thereby the shot to come to the orifice of the wound, then with a probe made apt and conuenient for the same vse, take out the shot. But if so be that you cannot without great paine and much searching finde the shot, it is much better to let it remaine within, than with prouoking of mortall accidents labour the taking of it out. For there is no daunger in letting the shot remaine in, and there is great perill in long searching, for that the aire doth alter the inwarde partes, and in searching, some inward part maye bee hurt with the Probe. I my selfe seruing at Muttrell, vnder the mightie and puissant Prince, Henrie the eight, about the yeare of Christs incarnation 1544. had the experience of eleauen sundrie souldiours shot into the bodie, without pearcing of anie inward member, and I could not get out the shotte without greate difficultie and making incision, and therefore I letting the shotte remaine within the bodie, did perfectlie cure the patients, and they liued long after without anie griefe or paine prouoked by the shotte.

In like manner about the yeare of Christ 1557. when as Philip king of Spaine besieged Saint Quintaines, I then seruing vnder him, had diuerse Souldiours in cure wounded in lyke sorte as is rehearsed, and the shotte still remaining in the bodie, they were (thanked bee God) restored to health. I doe also now call to remembrance that there came a Souldiour to London, when I first practised the art

of

of Chirurgerie, who was shotte in the bellie at the siege of Pauia, and made perfectly whole, the pellet remaining within. This souldiour twelue yeares after he was thus cured, comming to the Citie, had a great Apostume in the flanke, I then among other being called to the cure, wée applyed such medicines to the Apostume, as we accustomablie doe to Apostumes named Bubones, engendered in that parte. And when the Apostume brake and came to suppuration, we toke out a pellet of Lead, and after did cure the vlcer, and made the man whole. These I doe bring onelie for examples sake, that other Chirurgions being in the warres should not too much busie themselues, or put the patient to paines and in daunger, in taking out the shot. But nowe to that from whence we are digressed. The shot being taken out (if it may easilie be done) the contused and brused flesh remoued, & the abstersiue medicines applied, you shall procéede with incarnatiues and consolidatiues, as is set out in the cure of woundes of the bellie, in the second booke of my Enchiridion. And if bloud or mattier be in the bellie, vse wine warmed, and make iniections. But how much the soner thou doest haste the cure of the wounds in the belly, so much thou makest the patient surer of lyfe, and thy selfe of worshippe of the cure. Thou mayst vse well in these woundes when néede shall require, this incarnatiue following.

R. Thuris, Aloes, Farinæ hordei, ana. j. dragme, Terebinthinæ, Mellis, Succi myriophylli, ana. ij. dragmes. You shall mixe the flower with the iuyce, then dissolue and melt the honie and Turpentine at the fire, then put all together and make an vngnent. With this you shall spread your splegeants, and dip your tents in, & when the flesh doe grow well, and that the wound begin to be filled, you shall applie such medicines as are astringent & doth drie, as honie mixt with pouder and Baie berries, Mastike, flowers of Pomgranads, and Turpentine. And for an emplaister you may vse Emplastrum Chalcitides, set out in the second booke of my Antidotarie. You may not forget in these wounds of ỳ bellie to open a veine in the arme on the same side, and commande

the Patient to vse quietnesse in bodie, and flie perturbations and affections of the minde, so much as in him is possible.

Of the cure of wounds made with Gunshot in the partes called Artus, conteining the armes and legges. Chap. 7.

THe cure of such woundes as happeneth to the armes and legges, is after the method set out before. For first you shall (the wound being made in the fleshie parte) with your probe search out the shotte, and with your crowes bill take it out. But if it haue well nére pearced through the member, and that you maye fele it in the opposite part, then cut the place, and take out the shot, regarding alwaie that you cut none of the great veines which lieth toward the skinne, but if the shot cannot easilie be found, you may not therefore cease the cure of the wound, but procede in this manner.

If the holes of the shot doe differ and are distaunt, you shall roll fine lint together, and put it into the eie of your Probe made like an Nædle, and drawe it through the wound. But if the muscles do not suffer this, then you shal instill and powre into the wound the vnguent made with Butter, Precipitate, and my Egyptiacum, (whose composition is in the Antidotarie (and let it pearce into the wound. Then you shall make tents and dippe them in the same, and put into the orifices of the wound, and vpon the partes round about you shall applie the medicine made of oyle of Roses, Bole armoniacke, and the white of an egge mixed together. This medicine you shall so long vse, vntill you be past suspition of inflamation, and other accidentes. And when there appeare signes of concoction, you shall put but one parte of Butter, and two partes of Honie. After which thinges done, the vse of this medicine is conuenient.

Rec. Succi Apij, Myriophilli, Terebinthinæ, ana. j. ounce. Mellis, ij. ounces, Farinæ fabarum Hordei, ana, ij. dragmes, Aristolo-

Aristolochiæ rot.j.dragme and a halfe, Aloes, one dragme. First mixe the pouders with the iuyces and honie on a softe fire, then put in Turpentine. And in Summer, or whereas the Patient is of cholarike nature, in the place of Apium you may put the iuyce of Plantaine, or if you will more speedelie exiccate and drie, put to it Lithargirum made in most fine pouder, or else lime washed manie times, and dried and made in fine pouder. And when as the wound is well mundified, you may vse some incarnatiue, as this for example.

Rec. Terebinthinæ, ij. ounces, Mellis. j. ounce, Aloes, Thuris, Farinę hordei, ana. j. dragme, Aristolochiæ, halfe a dragme. And nowe you must haue regarde to your tentes, that you dailie make them shorter and lesser, and so cure the wound. But if it happeneth that through the violence of the shotte, not onelie the fleshie partes be wounded, but also the bones fractured and broken, then you shall vse a double kinde of cure. For the contusion must be cured as I haue heere before made mention, and the bone fractured must bee united and vsed as is set out at large in the fourth booke of my Enchiridion. Sauing that you shall not vse ligatures & splents in these kinde of wounds. But first you shal labour to take out the shot, next to remoue the contused and bruised flesh, then to procure the generation of newe flesh. After which, shall come the vnition of the bone. And because you maye keepe the part without motion when as the bones are ioyned, you shall vse the instrument for fractured legges. And then couer the member with soft clothes, that it may be defended from the iniurie of the aire.

Of the cure of those that are burnt with Gunne pouder. Chap. 8.

THe cure of those that are burnt with Gun pouder, doe require none other cure than if they were burnt with fire, or other flames. Wherefore it were superfluous to make mention of ỹ cure of it in this place,

if it were not that those which vse shooting in guns are subiect to the flame of pouder, & therfore I haue placed it with this booke. Wherefore if the skinne be not yet vlcerate, you shall applie to the parte oyle of bitter Almondes, oyle of Olines with salt, or that which is in common vse, to take two partes of the iuyce of Onions, and one part of varnish. But if there be vlcerations, then you must make this vnguent following.

Rec. Olei oliuarum. ij. pound, Secundæ corticis Sambuci, iiij. ounces. Boile these on the fire, then straine them strongly, after adde to them, Ceruſſæ halfe an ounce, Plumbi vsti, Lithargiri, ana. iij. dragmes. Myre these with a Leaden pestel in a morter, and make thereof a liniment according to art. But you must take hæd that you open not the bladders for the space of two or thræe daies, for when as they are opened, at the beginning they bring dolour and paine. The inflamation ceased, and the accidents which maye happen being put awaie, the rest of the cure is as the cure of vlcers, which varieth according as the vlcer is simple or compound.

Thus endeth the Treatise of Gunshot, compiled and published by Thomas Gale, Maister in Chirurgerie.

FINIS.

An Antidotarie conteining

hid and secret Medicines, simple and compound: as also all such as are required in Chirurgerie: faithfully gathered and published, by Thomas Gale, Maister in Chirurgerie.

Antidotarie.

WHy with so coy, and strange a looke,
dost thou me thus beholde?
Am I vnknowen vnto thy sect,
or my vse manyfold?

Chirurgion.

Where as acquainted men be not,
what should they faune and smile?
I know you not my lookes it shew,
I will you not beguile.

Antidotarie.

My Maister hath sent me abroade,
to his great cost and paine:
Willing me with Surgions to dwell,
to their worship and gaine.
If that but once my name you heare,
you will me know certaine,
ANTIDOTARIE cald I am,
which great treasures containe.

Chirurgerie.

Antidotarie should I know,
but thy speach, and aray,
(Which yet I haue not hard or seene)
doth the contrary say.

Antidotarie.

In deede I was naked and bare,
with errors eke infect,
And barbarous names of medicines,
to which I was subiect.

But lo, I am now garnished,
with medicines of price.
Which olde Hippocrates did vse,
and Galen did deuise,
Auicen, Rasis, Mesue,
Guido, Brunswike, Vigo.
And all my Maisters trauailes eke,
he hath added me to.
And though my speach for want of vse,
seemth somewhat strange to thee,
Yet if learing thou wilt imbrace,
and acquaint thee with me,
Familier thou shalt me finde,
easie to entertaine.
Chirurgion.
Then giue me leaue thee to imbrace,
do thou with me remaine,
And for thy sake I will not spare,
labour and tyme to spend.
Antidotarie.
If thou so doe, great gaine will spring,
and men will thee commend.
W. Cuningham.

Thomas Gale Chirurgion,

vnto the friendly Readers, salutations.

WHen as I had finished my Institutions, Enchiridion, and Treatise of woundes made with Gun shot, (louing Reader) I dyd right well perceiue that the precepts of the art in them conteined, should not so farre extend and serue so wel thy vse, except I dyd set out such medicinal instruments, as both are mencioned in the same bookes, and of necessitie are required in the art of Chirurgerie: as Unguents, Dyles, Baulmes, Lotions, wound drinkes, Emplaisters, Cerots, cataplasmes, Trochisce, pou-

ders,

ders, and such lyke. For although I haue set out diuers approued medicines in other my workes, yet they be but as an handfull in comparison to this Antidotarie, and put forth there onely for exãple sake. Wherefore I haue drawen out of the most approued authors olde and new, such medicines as be both easilie prepared, and of most effect and vertue, adding hereto what I haue found profitable and necessarie by long experience and practise. And although perchaunce at the first it may seeme somewhat obscure and hard) because I put the recepts and compositions in the latine tongue) yet if you doe accustomably vse to reade them, and conferre either with the Apothecarie, wher as you doe not perfectly vnderstand the same, or else vse the helpe of a Dictionarie, they will be vnto you bothe familier & plaine. And thinke not that I haue done this (louing Reader) bicause I would make it more hard and difficult: But I did it chiefely for that the latine names are vniuersally vsed, and that there are an infinit nũber of simples which want English names, and those (for the more part) that may be Englished, are not vniuersally knowen through England by that same name, bicause of the diuersitie that is vsed in calling of simples, according to the countrey. And yet I doe not omit to set out in the English tongue, as well the methode and way of composition of such medicines, as I haue placed in this Antidotarie, as also faithfully declared their vertues and vse, for what causes they are inuented, and for what infirmities they serue.

And although it seeme hard, obscure, and difficult at the first face, yet follow thou still the counsell of the wise Poet, who saith:

Assiduo illisu durum cauat vndula saxum.

Which verse may be Englished with vs in this maner.

The watry droppes so moyst and soft,
Doth perse hard stones with dropping oft.

So

So in like case (dere Reader) the hard names of medicines by oft reading will be perfed, I meane they will be as facile and easie vnto you, as possible may be. Now there resteth no more but that thou wilt with the same good will and minde receiue these my trauailes and expences, that I frely doe offer them vnto thée. So doing, I will not here stay, God willing, but participate other of my labours with thée. And thus I bid the most heartely farewell, in Christ our Sauiour. At my house in London, the first day of August. 1563.

The first booke of the Antidotarie, conteining briefely the simples & compounds, aunswering to all the intentions curatiue required in the art of Chirurgerie, by Thomas Gale, Maister in Chirurgerie.

Of medicines repercussiue, both simple and compound. Cap. j.

MEdicines which doe repel and driue backe, be of qualitie cold, and such as haue an adstringent facultie, although they be hot. The vtilitie springing by the right vse of these, is great. For we stay by them the flure of humours in their beginning. Héereof doeth it followe, that we let the generation of inflamations, Apostumes, Vlcers, Feauers, dolour, and paine. Of simple medicines repercussiue, these are some in most vse. Waters either fountaine or distilled, Vetches, Bursa pastoris, Mints, Purslane, Plantaine, Colewoorts, Wormwood, Centaurie, Pellitote, Pentaphillon, Knotgrasse, Houseléeke both great & lesse, the leaues & tops of Brambletrée, the Myrtile trée, Balaustiũ, Galla omphacitis, omphacium, vineger, wilde Apples

ples and Peares, Medlers, Seruice tree and fruit, Allum, Atramentum sutorium, Cerusa, Litharge, Acatia, Bolus armena, Terra sigillate, Hypocisthis, Aloes, Amomum, Agaricke, Calcanthum, Crocus, Corall, Hęmatites, Ladanum, Myrrha, Chrysocolla, Cadmia, Cinabaris, Sanguis draconis, Spodium, Tragacantha, the Oke, Cypresse leaues, and Myntes, Mandrage apples, and iuise, Henbane, Popie, whites of Egges, and such lyke. Among compoũds these are numbred, which doe driue backe and staye the flure of humours. Dyle of Roses, Cataplasmes made with the iuise of these hearbes, and with floure. Also cerotes, as cerotum è Psyllio, ceratum Rosaceum, ceratum Myrtinum, Diacalcitis, Oleum Rosatum vulgare, Oleum Rosatum Mesuę, Oleum Rosatum omphacium, Oleum Cydoniorum Mesuę, vnguentum santallium Mesuę, Hydreleon Galeni, Cataplasma Guil. Buttes ad phlegmones, vnguentum contra phlegmones & pruritus, vnguentum Pomphologos.

Of medicines attractiue, simple and compound. Cap. ij.

MEdicines which doe draw and attract be of hot temperature and subtile partes, they doe draw out of the inwarde partes, as when any venemous mattier is in the bodie. Also when splents, bones, scales, thornes, arrow heads, are fired in any parts, it sucketh out superfluous moysture in dropsies, and such lyke sicknesses.

Medicines simple attractiue be, Propolis, Sagapenum, ammoniacum, Opoponax, Galbanum, Euphorbium, Calx viua, Aristolochia rotunda, Lepidium, Mustard seede, Tithimallus, Pyrethrum, Cantharides. Also stercus columbium, Gallinaceum, anserinum, arietinum, and all such like fymes. Olde oyle, also Turpentine, Larigna, picea abiectina: and such like as haue a great vertue attractiue: Of compound medicines they vse oyle of Mustard seede, Emplastrum apostolicon Nicholai, Oxycroceum, Emplastrum ex alijs Aetij, and diuers other, which you shall finde in the second booke of the Antidotarie.

Of

Of medicines abstersiue, simple and compound. Cap.iij.

Such medicines as doe mundifie, and cleanse wounds or filthie vlcers: are called abstersiues. Of which simple commonly vsed, be Smallage, Roses, Plantaine, Scabiouse, Nettles, Celondine, Radix dracontij, Lupines, Aristolochia longa, & rotunda, Alume, Barley, and Beane flower, Flos iris anagallis, Almonds, Sothernewood, Sperage, Asplemos, Wormewood, Betes, Camepitis, Harts horne, cortex Caparis, Elleborus albus & niger, Horehoūd, Parietarie, Valerian, whay, Honey, Staphisagre, Nitrum, the compounds are Melicratum, Oxycratum, Oxymel, Oemel, Precipitatis puluis, Vnguentum Egiptiacum nostrum, veride andromachi, Vnguentum Apostolorum, Vnguentum mundificatiuum Magistrale, and diuers other lyke.

Of resoluing medicines, simple and compound. Cap.iiij.

When as through great flures there are humours impact in any parte, then we vse resolutiue medicines: the Grekes cal them Diaphoretica, and they be of hot and moist temperature. The simples Diaphoretike, are these. Hot water, hot wyne, Oyles, that be hot in qualitie, Anthemis, Linesede, Fenegreke, Myntes, Neppe, Calaminth, Peneriall, Nettles, Balme, Pugwort, Camomil, Malowes, Melilote, Dill, Stichados, Mariozam, Fumiterry, Wormewood, Enula Campana, Walwort, Velder, Valerian, Horehound, Smallage, Colewortes, Beane, and Barley, meale, Turpentine, Ladanum, Sagapenum, Galbanum, Opoponax, Bdellium, Ammoniacū, Coliphonium, Myrrhe, Frākensence, and the grese of Gose, Capons, Hens, Cranes, Duks, and such lyke. Among compounds specified in the second boke, these are numbred. Barbarum emplastrum, Emplastrum ex chalcitide, Triapharmacon, Diachilon albū, oyles of elder, Lilies, Dill, Camomil,

Oleum

Oleum Rosatum compositum Mesuę, Oleum Nardinũ compositum Mesuę, Emplastrum Henrici octani, Emplast. Gul. Firmigonis militis.

Of medicines mollificatiue, simple and compound. Cap. v.

MEdicines mollificatiue which properly in Greke are named Malactica, are temperately hotte, without any manifest qualitie, either of moysture or dryneſſe. We vſe theſe medicines when as we will mollifie & make ſoft, bodies which be ſcirrhous and hard. Of the ſimples which doe mollifie, are theſe: All fatneſſe, Butter, Ammoniacum, Bdellium, Atriplex, the rootes of Althea, Waxe, Colophonie, Fenugreke, Cinamome, Saffron, Cypreſſe, Galbanum, Lyneſeede, Laudanum, Lorrell, Lilies, Mallowes, Opoponax, Oeſipius, Piche, Pſyllium, all Reſines, the marrow of a Harte, a Calfe and Ore, Storax and Prepolis, and Veſcelo.

The chiefeſt compounds herein vſed, be Diachylon magnum Meſuę, Dialthea cum gummis Nicholai, Emplaſtrum de Melliloto Meſuę, Diamelliloton Andromachi ex Galeno, Emplaſtrum ex alijs Aetij, Diachalceteos Galeni, Diachilon Meſuę primæ deſcriptionis, Ceratum é ſtyrace, Cyratũ gratia Dei, and ſuch lyke, ſet out in the ſecond booke.

Of medicines which doe ſuppurate, ſimple and compound.

Cap. vj.

WHen as all hope is paſt by other medicines, then we take thoſe in vſe which do ſuppurate. And note that generally the great inflammations for the more part, doe induce paine, and palſatiue dolour, & come at length to ſuppuration.

The ſimples which doe ſuppurate for the more part, are Althea, Brãckurſine, Axũgia, Butter, Calues talow, ſaffrõ, wax, Ammoniũ, Fẽgreke, wheat, barly, cole flower, ỳ roots of Bryonie,

Bryonie, white Lilie heads, Ladanum, Lyne sæde, Mastiche, Oelipus, Pich, Frankensence, Rosine, Styrar, Figges, Stichados, Smyrnium.

Of compounds which be of force in this case: are Picatum ceratum, Terapharmacon, Basilicon, viride Andromachi, Pastillus Musię, Emplastrum ex fremento Democrati, and diuers other which nęde no rehearsall.

Of medicines causticke. Cap. vij.

Causticke medicines which doe remoue, and take away filthinesse in vlcers, and superfluous flesh, are Precipitate, Sublimate, Alome, es Viride, Calchantum, Sandaracha, Arsenicum, Puluis noster secretus, vnguentum Egiptiacum, vnguentum Apostolicon Vigonis, Pastillus Androsaus, Pastillus Polyidę, Pastillus de Minio Ioannis de Vigo, Ceratum Viride Iamerici, Aqua corrodens, Aqua Mercurialis, and diuers other which were superfluous to reheasę, seing they are readely founde in the second booke, or else in the table belonging to the whole workes. And that I haue here in this place remembred the chiefe and principal Causticke medicines, which are most in vse in these our daies.

Of medicines which do aswage dolour & paine: both simple and compound. Cap. viij.

Medicines which doe ceasę dolour and paine, (called in Græke Anodyna) be Dill, Worme wood, Gladine, Agarike, Cardamone, Chamomille, Centaurie, Chamępetis, Eringium Daucus, Iris, Persely, Rosemarie, Iuniper, Milium, Opoponax, Althęa, Rew, Serpillum, Lyneseede, Hyosciamus, Fygges, Castorium, Cardamome, Agallochum, Atriplex, Serpillum, Fenegreke, Peucidanum, the white of egges, and such like.

Among compounds, these are in vse, Butter, oyle of Roses, Violets, Phar, Popye, Lettise, Pursulane, Oleum, Mastichinum Mesuę, Oleum Populium Nicholai, Oleum Hyperici,

rici Magistrale, Oleum Mandragorę Nicholai, Oleum Lumbricorum, Vnguentum infrigidans Galeni, Ceratum Oxycroceum Nicholai, Emplastrum de Speciebus, Cataplasma D. Gul. Buttes ad dolorem sedandum. **And such lyke.**

Of Medicines incarnatiue, simple and compound. Chap. 9.

MEdicines incarnatiue which doe also engender flesh, are Aristolochia rotunda, Frankensence, Ladanum, Aloes, Cadmia lota, Pompholix, Amylon, Manna, Myrrhe, Storax, Spodium, Turpentine, Colophonia, Chrysocolla, Piche, Christallus, Oesypus.

Of compounds they vse Viride Galeni, Theriaca, Aureum Mesue, Fuscum Nicholai, Tetrapharmacon, Dia Irios, Puluis Rasis, Vnguentum Basilicon Mesue; Ceratum Viride Iamarici, Vnguentum incarnatiuum Brunsuicensis. **And diuerse other set out both in the Enchiridion in their proper places, and also in this second booke.**

Of Medicines which doe cicatrise simple and compound. Chap. 10.

MEdicines which are to be vsed to cicatrise an vlcer, when as it is filled with flesh, are these: Aloes, Bolus armena, **Allome, Aristolochia, Anulum, Balaustia,** Bdellium, Anagallis, **Centorie, Camepitis, Chamedris, Cadmia,** Eupatorium, esvstum, Acatia, Gentian, Gipsum, Iris illirica, Licium, Lupines, Mel coctum, Myrtius, Myrrhe, Lithargyrum, Plantaine, Pentaphillon, Paper combust, Sanguis Draconis, Sarcocolla, Stymmi, Sandaracha, Terra Lemnia, Symphiton maius, **the leaues of Elder, Frankensence, Tormentill, Veruaine, Ceruse, Cupresse galls, Tutia, and such like. The compound are** Dia cadmia, Dia ladani, Vnguentum album Rasis, album ê Ceruſa, vnguentum Pompholigos, Puluis Epuloticus, Vnguentum Nicholai, **being the seauenth vnguent set out in the second booke.** Diapipereos Galeni, Dia Dictamu Eiusdem, Emplastrum Calisiense, Emplastrum

Gul. Firmigonis Militis, Ceratum Viride Iamerici, Vnguentum deſiccatiuum rubrum, and diuerſe other.

Of Medicines Conglutinatiue, ſimple and compound. Chap. 11.

MEdicines conglutinatiue ſimple, be Elder, Waltwort, Syderites, Symphitum, Plantaine, Anogallis, Androſemon, Copwebs, Lana ſuccida, new Cheeſe, Iſatis, Myrrhe, Sarcocolle, Aloes, Barlie combuſt, Pitch, Roſen, and Gum Arabike. Of Compounds they vſe, artificial balmes, among which, that which is ſet out in the ſecond booke after our inuention, is right excellent, and of great vertue, Barbarum emplaſtrum Galeni, & vnguentum è vermibus, Oxeleum Galeni, Oeneleum, Ceratum viride Macherionis ex Galeno, and diuerſe other, of which I nede not to make a vaine and ſuperfluous rehearſall.

FINIS.

The ſecond booke of the

Antidotarie, containing the medicines compound, and their waie of compoſition, with their vertues and properties, by Thomas Gale Maſter in Chirurgerie.

IN the former booke (louing Reader) of this Antidotarie, I haue ſet out briefelie and eake compendiouſlie, ſuch medicines, ſimple and compound, as are required in the curatiue intentions of Chirurgerie: now I thinke good in this ſecond booke, to declare the compoſitions of all ſuch compoundes as are there remembred, and bee of moſt price in the arte. Vnto which I haue alſo added no ſmall number of Vnguents, Oyles, Balmes,

Balmes, Emplaisters, Cerotes, wound, drinke, &c. of mine owne inuention. And heere note, that there is difference betwixt the Grecians and the later writers, touching the names of these compound medicines. For the Grecians did call vnguents onelie Aramatike Oyles, wherwith they did annoint the bodie. The Cerotes they called such medicines as receiued into their composition oyle and ware. Emplaisters be medicines which take into their composition diuers kindes of simples, but chiefelie mettaline bodies, and these are so long to be boiled together, vntill they will no longer defile and cleaue to the hands. Cataplasmes bee medicines standing on Hearbes, Flowers, Oyles, Wheate, Barlie, Dates, Beanes, and other flowers, which are not so long to be boiled on the fire as Emplaisters are. Trochisce be compositions made round, and were deuised to keepe long time such simples in their force which doe enter into their compositions.

Powders be medicines beaten and made subtill and fine like moates of the Sunne, as they call them. Waters are prepared diuerse waies by the arte of Alchimie. Decoctions, Lotions, and Iniections, be liquors and other things boiled together and then strained. What quantitie of euerie simple should be admitted to euerie forme of composition, cannot in generall rules be set out, but doth varie according to the curatiue intentions. Particular formes of compoundes, such as bee of most price, and vsed, shall followe in this second Booke: as also their waie to make them, and to what vse they serue, beginning first with vnguents.

The description of an vnguent called Infrigidans Galeni.

RRec. Olei Rosati omphacini, j. pound, Ceræ albæ, three ounces.

You shall melt the ware in the oyle, then wash it often with cold water, vntil it cõmeth to white coulour. Last of all wash it with water of roses, & put to a little portion of

vineger. It is good to refrigerate hot burning feauers, and the heate of the liuer, it allwageth the paine in the head. It must be anointed vpon the ridge bone, or spine of the backe, vpon the temples, and on the region of the liuer.

Vnguentum ad ambusta.

Rec. Olei rosati, viii. ounces, Olei ex ouis, ii. ounces, Nitri albi puluer. ii. ounces, Ceræ albæ, one ounce and an halfe, Corticis mediani Sambuci, m. i. Make hereof an vnguent with a soft fire according to art. It is verie good in burnings and scaldings, and like affects.

Vnguentum de Artanita maius Mesue.

Rec. Olei irini, ij. pound, Succi Ciclaminis, iij. pound, Cucumeris agrestis, j. pound, Butyri, i. pound, Pulpæ colocinthidis, iiij. ℥. Polipodij, vj. ℥. Euphorbij, ℥. ℌ. Bruse those that are to be bruised, and let them be infused in a vessell of glasse with the iuyces and oiles eight daies, then make them hot in vase duplici, & straine them, then adde Sagapeni. vij. ℥. & ℌ. Myrrhe iij. ℥. These must be dissolued in vineger, and boile all in the decoction afore said, vntill the iuyces be consumed, then adde to it Ceræ. v. ℥. Fellis vaccini, vii. ℥. and ℌ. Make all so hot that the ware may melt, after put into it by little and little the pouder following.

Rec. Scammonij, Aloes, Colocinthidis, Mezerei, Turbith, ana, vij. dragmes and a halfe, Salis gemmæ, iiij. dragmes and a halfe, Euphorbij, Piperis longi, Zingeberis, Chamæmeli, ana, iii. dragmes, Misce et fiat vnguentum. It prouoketh vomite being anointed on the stomack, but on the nauell it maketh the bellie lose, so that it is good against dropsies, for ỹ it doth much expell cerous humors, it doth also kil wormes, and is vsed in such bodies as are not able to take anie purging medicines inwardlie.

Vnguentum Rosarum Mesuæ.

Rec. Axungiæ porcinæ j. pound. Wash it nine or ten times in hot water, and as often in colde. Then you shall adde to it Rosarum rubrarum recentium, one pound.

Macerate

Macerate them and let them stand together seuen daies, after boile them with a soft fire, then straine them, and after put so many new roses, and doe as you did with the first. Then take so many more new, and so the fourth time, doing alwaies as with the first roses. Then adde Succi rosarum rubarum, vj. ounces, Olei amygdalarum dulcium, v. ounces. Boile all on a soft fire, vnto the consumption of the iuyce of Roses, then straine them, and reserue it to that vse. Alij addunt Opij one dragme. It ceaseth Inflamations, Herpes, and Erisipelas, and is good against the head each comming of heate. It doth allwage the hot distemperance of the stomack and liuer, Vnguentum album Auicennæ, Vnguentum de ceruſa dictum.

Rec. Lithargyri, j. dragme, Ceruſæ, v. dragmes, Ceræ albæ, vij. dragmes, Olei Roſati, ij. ounces, Albuminis ouorum numero. j.

The ware being molten in the oyle with a soft fire, put in your litarge and Ceruse well beaten and searced. Mixe these, and last of all you shall put in the white of an egge. This vnguent is good against adustion, scabs, and vlcers.

Vnguentum de Tutia Magistrale.

Rec. Olei Roſati, Olei omphacini, ana, vj. ounces, Olei Myrtini, Vnguenti Populei, ana, ij. ounces, Foliorum Plantaginis, Solani, ana, m. ij.

The hearbs being well cut and bruſed, mixe them with the oiles, letting them macerate together eight daies. Then boile them a little and straine them, which done, you shall adde of Ceræ albæ. iiij. ounces and a halfe. Boile them vntill the ware be molten, stirring it with a slice. And take it frõ the fire, adding to it of Lithargyri, vi. ounces, Pompholigos siue Tutiæ preparatæ, Ceruſæ tritę, ana, ij. ounces, Plumbi vsti vi. ounces, Caphuræ, j. ounce. Put all in a Leaden morter, & let it be stirred two houres continuallie. After put it into a vessell of Glasse, and reserue it to thy vse.

Aliud simile, Nicolai.

Rec. Olei rosati, Ceræ albæ, ana, vi. dragmes, Succi solani,

j.dragme, Ceruſæ lotæ, ij.dragmes, Plumbi vſti et loti, Tutiæ preparatæ, ana.j.dragme, Thuris, halfe a dragme.

Melt the ware in the oile with a ſoft fire, then put them in a leaden mozter, and put the pouders into them, continuallie ſtirring them. And then put to the iuyces of the hearbs, ſtirring it ſtill foz the ſpace of fiue houres.

Theſe two vnguents are excellent in exicating Eriſipelas, filthie vlcers, alſo foz vlcers of the legs, & do fill the holow and emptie parts, it doth furthermoze refrigerate & cicatriſe.

Vnguentum de Lythargiro.

Rec. Lithargyri, ij. ounces, Ceruſæ halfe an ounce, Aceti, j. ounce, Olei roſati quantũ ſufficit. Make theſe in an vnguent with a ſoft fire, it cureth vlcers and excoziations made thorough riding, ſtraitneſſe of the ſhoe, oz otherwiſe hapning.

Tripharmacum eiuſdem Meſue.

Rec. Lithargyri, Aceti fortis, ana.iii.℥. Olei cõmunis.vi.vnc. Let the Litarge be finelie poudered, and put to it the oyle and vineger, and ſtirre them continuallie. It is of like vertue with the vnguent going befoze, foz it healeth ſcabs and vlcers of the ſkin, and ſuch like.

Vnguentum ad Scabiem.

Rec. Styracis liquidæ, Terebinthine lotæ, Butyri loti, ana, vij.℥. Succi limonum, i.℥. & ℔. Hellebori nigri puluerizati, i.℥. Salis, ij.℥. Mire them together, and make therof an vnguent accozding to art.

It hath the like vertues with the vnguent going befoze.

Vnguentum de Minio.

Rec. Minij læuiſsime triti, ij.℥. Olei roſati, Olei Myrtini, ana.ij,℥. Coquantur lento igni cum Ceræ albæ, halfe an vnce. Make and vnguent thereof accozding to art.

Aliud de Minio Camphoratum.

Rec. Minij triti, iij.℥. Lithargyri, ij.℥. Ceruſæ. j.℥. & ℔. Tutię, Camphoræ, ana, iii.℈. Olei roſati. p.i. and ℔. Ceræ albæ. ii.℥. The ware being molten in the oile vpon a ſoft & gentle fire, put it in a leaden mozter, and put the other ſimples made in

moſt

most fine ponder into it, and stirre them continuallie.

This vngent is good against olde and maligne vlcers, & such as will hardly be cured, &c.

Tetrapharmacon Galeni.

Rec. Picis nigræ, Resinæ, Ceræ, Adipis vaccini, ana, q.s. Fiat vnguentū. It doth heat & make moist the part to which it is applied, it easeth dolour, & doth suppurate & make mattier or sanies. Wherefore it is right good for to bring Apostumes to suppuration.

Vnguentum Basilicon minus Mesue.

Rec. Ceræ flauæ, Resinæ pinguis, Picis grecæ, ana, i. pound, Olei communis q.s. Fiat vnguentū lento igni. Some put Turpentine to it, some in the place of it doe put pitch.

This vnguent answereth to the vertues of Basilicon minus, but it is more weake. Wherefore it is more apt for græne wounds of the head and neruous partes, and vlcers.

Vnguentum Basilicon maius Mesuæ Galeni Enneapharmacum est.

Rec. Ceræ albæ, Resinæ pini, Sepi vaccini, Picis Grecæ, Picis nigræ, Terebinthinæ, Thuris, Myrrhæ, ana. i. ℥. Olei communis. q.s. Fiat vnguentum.

Such vlcers as be without inflamation in ỹ neruous & sinnowie partes, this vnguent filleth with flesh, & incarneth verie well.

Vnguentum fuscum Nicolai.

Rec. Olei, i. pound & ℔. Ceræ noue, iiii. ℥. Picis Grece, Picis nigrę, ana. ii. ℥. Masticles, Galbani, Thuris, ana. i. ℥. Sagapeni. ii ℥. Terebinthinæ. i. ounce, Fiat vnguentum.

This vnguent hath a power & vertue of healing & attracting.

Vnguentum Capitale Conciliatoris.

Rec. Gummi eleni. iii. ℥. Hammoniaci, ii. ℥. Terebinthinæ, Resinę pini, ana. iii. ℥. & ℔. Cerę q.s. Make of this an vnguent, & let the gums be dissolued according to art, & so long boiled, vntill they come almost into the forme of a cerote.

Vnguentum è Caprifolio Carpi.

Rec. Terebinthinæ, Resine pini, Cerę noue, ana, iiii. ounces, Olei rosati, viij. ounces, Masticles, Thuris, ana, one ounce,

Gummi eleni,ij.ounces, Caprifolij, Betonicæ, ana,iij. ounces, Vini optimi,x.pound. The Woodbinds and Betonie beeing stamped,let them stand infused in wine foure and twentie houres. Then adde to them all the other parcells,except the Gums,Frankensence, and Mastike,boile these on a cleere fire vntill the halfe part of the wine be consumed, and that it beginneth to ware greene,then straine it and let it coole. Then boile it againe vntill all the wine be consumed, then straine it againe,and then boile it, and adde the rest of the parcells in fine pouder,and then put it in a colde place,and reserue it to thy vse.

This is a right excellent medicine in woundes of the head.

Vnguentum è Calce magistrale.

Thou shalt euerie date once wash the Chalke,and let the water be taken awaie with a Spunge,doe this ten dayes. Then washe it with Rose water, and let it drie,and then Rec. Huius calcis ita extinctę, three ounces, Olei rosati, one pound, Cerę albæ,three ounces.

Melt the ware in the oyle, then taking it from the fire, put the Chalke made in most fine pouder, vnto the oyle and ware,and make an vnguent of them according to art. This vnguent is good for burnings and scaldings.

Vnguentum Populeon Nicolai.

Rec.Oculorum Populi arboris recentium mense Martio collectorum,a pound and a halfe, Axungiæ porcinæ præparatæ,iiij. pound.

The Pople buddes must bee bruised, and mixed with your Axungia,vntill your other hearbes may be prepared, then adde to it Foliorum Papaueris agrestis,Foliorum Mandragoræ,foliorum Hyoscyami,foliorum Solani,foliorum vermicularis,aut Crassulæ,foliorum Lactuæ, foliorum Semperuiui,foliorum Bardanæ,foliorum Portulacæ,foliorum Violarię, foliorum Vmblici veneris,ana.iii.ounces.

These hearbes must bee mixed & tempered with Axungia, then

then take of Wyne a sufficient quantitie: Boyle them to the consumption of the wyne, then straine them and make of them an vnguent according to art.

It is mernailous precious against raging heate in feauers, and it prouoketh slæpe, the temples being annoynted with it. &c.

Vnguentum Dialthea simplex Nicolai.

Rec. Radicis altheæ, two pound. Seminis Lini, Fœnogræci, ana, one pound. Olei, foure pound, Ceræ. j. pound. Terebinthinæ, two vnces. Resinæ, vj. vnces.

Let the rootes be cut and brused with the sædes, and stande thræ dayes in eight pintes of water: then boyle them and take two pound of the Muscilage & boile it with the other thinges, vntill all that is waterie be consumed. And make thereof an vnguent according to art.

This vnguent doth mollifie, heate, and make moyst.

Vnguentum Dialthæa cum Gummis Nicolai.

Rec. Radicum altheę, two pound. Seminis Lini, Fœnogrę-ci, ana, one pound. Pulpæ scillæ, vj. vnces. Olei, foure pound. Ceræ, one pound. Terebinthinæ, two vnces. Resinæ, Picis Grecæ, ana. vi. vnces.

Make an Vnguent as is afore sayde, then adde to the Gummes following, first being dissolued in Wineger.

Galbani, Gummi Hederę, ana, two vnces.

Wire them well, and reserue it to thy vse.

This vnguent properly helpeth the paine of the brest, comming of colde, and the Pluresie, and healeth all partes of the brestes, which are refrigerated, it doth moysten, mollifie and make hot.

Vnguentum Santalinum Mesuę.

Rec. Rosarum ruberaum, one vnce. Sandali rubri. j. vnce, æj. dragmes. Sandali citrini, Sandali albi, ana, vj, dragmes. Spodij

halfe an vnce. Caphuræ, two dragmes. Cerę albę, three vnces, vj. dragmes. Olei Rosati, one pound. Boli armeni, vij. dragmes.

You shall melt the Ware in the oyle, and wash it often times with cold water, after that all your other percels being made in fine pouder, you shall put them together, and make a fine vnguent according to art.

It doth extinguish and put away all inflammations of the liuer and stomacke, and other parts of the bodie.

Defensiuum Magistrale.

Rec. Boli armeni, Sanguinis draconis, Terre sigillate, ana one vnce. Olei Rosati. vj. vnces. Cerę, one vnce and a halfe. Aceti, foure vnces.

Boyle the oyle, vineger, and ware together, vntill the vineger be consumed. Then taking it from the fire when as it begin to refrigerate and ware colde, put to your other parcells made in fine pouder, and reserue it to thy vse.

Mundificatiuum Magistrale.

Rec. Mellis Rosati colati, i. ounce and a halfe, Terebinthinę clarę. iii. ounces, Succi Apij, Succi Prasij, ana, six dragmes, Succi absinthij, two dragmes.

Simul coquantur, deinde addentur.

Farinę Hordei, farinæ Fabarum, ana, vi. dragmes, farinæ Lupinorum, farinæ Orobi, ana. iii. dragmes, Sarcocollæ, Myrrhæ, ana. i. dragme and a halfe.

Bring them into pouder and make an vnguent according to arte. And this vnguent is right excellent to mundifie a wound or filthie vlcer, and thereof it is called Mundificatiuum Magistrale.

Vnguentum Viride Andromachi ex Galeno.

Rec. Resinæ pini. ii. pound, Ceræ, i. pound and a halfe, Olei communis, viii. ounces, Aeruginis eris, iij. ounces.

You shall put the Rosen and ware into the oile & melt them:

them together, thē put to your Erugoeris made in fine pouder, and make thereof an vnguent as art requireth, it healeth grāne and fresh wounds, and such like, &c.

Vnguentum Apostolorum Auicennę.

Rec. Ceræ albę, Terebinthinæ, Resinæ, Hammoniaci, ana, xiiii. dragmes, Aristolochię longę, Thuris, Bdellij, ana, vi. dragmes, Myrrhe, Galbani, ana, foure dragmes, Lithargiri, viii. dragmes, Opoponacis, Aeruginis, ana, two dragmes, Olei communis, two pound, Hieme verò, three pound.

You shall dissolue your gums in good white vineger, then put them to your oile, ware, Rosen, Turpentine, and Litarge, and boyle them on the fire vnto the consumption of the Vineger. Afterward the other percelles being made in fine pouder you shal also adde, and make an vnguent according to art.

It is of great force against woundes and vlcers which are hard to be cured: also for fistules, it taketh away deade flesh, and restoreth in the place sound and new. It doth mollifie and heale. &c.

Vnguentum Egiptiacum Mesuę.

Rec. Aeruginis, siue dragmes. Mellis, xiiij. dragmes, Aceti albi, vij. dragmes.

Boyle these on the fire, and fyre them, so long vntill it be red. Other take of this vnguent, fyre vnces.

Rec. Calcanthi vsti, two vnces, Olei Rosati, iij. vnces. Cerę, quantum sufficit.

Make all in an Vnguent according to art. This is right good against olde woūds, Fistules, and also it taketh away superfluous flesh, and doth vehemently excicate and dry e.

Aliud Ioannis de Vigo.

Rec. Aquę plantaginis, Vini malorum gran. Mellis, ana, two vnces.

Alumi-

Aluminis rupis, Aeruginis, ana, x. dragmes.

Boyle these together, and fyre them so long vntil that it ware redde, then reserue it to thy vse.

It serueth to the lyke effects as the other before.

Aliud Guydonis.

Rec. Mellis, one pound. Aceti optimi, vj. vnces. Aeruginis, one vnce. Aluminis rupis, v. dragmes.

Boyle and fyre them so long together vntil they war redde. Then let it cole, and kepe it to thy vse.

Vnguentum defensiuum & repercussiuum Brunswicensis.

Rec. Olei Rosacei, iiij. vnces. Boli armeni, ij. vnces. Terræ sigillatæ, Fœnogręci, ana. i. vnce. Caphuræ. i. dragme. Solatri, Semperuiui, ana. i. M. Ceræ, two vnces.

Bruse the herbes and straine them, and put them to the other things: and make of all an vnguent according to art.

This vnguent is vsed to defend woũds from accidẽts. Also in the beginning of inflammations, to cease or rather let the flure of humours.

Vnguentum incarnatiuum eiusdem.

Rec. Terebinthinę, iiij. vnces. Mellis, halfe an vnce. Olibani, one dragme. Croci, one scruple. Olei Rosacei, Cerę. q. s.

Make hereoff an vnguent according to art.

It is a right good incarnatiue, prouoking and causing flesh to grow in all maner of wounds. &c.

Vnguentum ad phlegmones & pruritus.

Rec. Olei rosati, three vnces. Infrigidantis Galeni, Vnguẽti Rosarum populionis, ana. i. vnce. Succi plantaginis, Semperuiui, Vini granatorum, ana halfe an vnce. Aceti Rosarum, two dragmes. Lithargiri auri, Argenti, ana. i, vnce and a halfe.

Ceru-

Ceruſę.v.dragmes,Tutię.j.dragme.

Put the oyle,the iuyces, vineger and wine into a mor-ter of lead,and labour them well, and put thereto the mi-nerall in fine pouder, and when they are well wrought, put thereto the vnguents, and worke them all together, and ſo make your vnguent.

This Unguent is for itch of the legges and inflamma-tion, excoriation, burning and bliſtering, comming of hot humours,and for hot and ſharpe vlcerations.&c.

Vnguentum Phompholigos.

Rec.Olei Roſati.x.vnces.Cerę albę,three vnces.Succi So-latri.viij.vnces.Ceruſę lotæ.iij.vnces. Plumbi vſti, Tutię,ana, two vnces. Thuris.i.vnce.

Boyle the iuyce of nightſhade with ȳ oyle,till the iuice be conſumed,then put to the wax, and when it is relented and ſet from the fier,ſo that it be nére cold,put thereto the Ceruſa,burnt leade, Tutia, and Thus, made in fine pouder, and ſearſed through a fine ſearce,ſtyre them well together and kæpe them in a tinne pot.&c.

This vnguent is not onely good in dryying vp of vlce-rations of the leges and other places of the bodie, but it is alſo an excellent remedie,to preſerue a canker vlcerate,that it go no further,& alſo a ſinguler good remedie,for all other Cancerous vlcerations, both in the breſt and in all other places of the bodie.

Vnguentum Nicolai Florentini.

A ſpeciall vnguent for the crampe,if the patient haue no feuer,it was practiſed by Nicholas Flo-rentine.

TAke a fatte Goſe, and take out hir bowels, then take a Catte and cut hir in ſmall pæces, and put the ſame pæces into the belly of the Goſe, with ſmall pæces of Bacon, Myrrhe and Frankenſence mingled all together, then ſow vp the belly of the Goſe,and put hir on a ſpit,and roſte hir at a ſoft fier.Set a dripping panne vnder hir with Vineger and white wine,and when the water of the Goſe

is dropped away, then let the fat drop into the vineger and the wyne. After take the fatte that swimmeth aboue the viniger and wyne, and kéepe it in a vessell, and boyle the Goose againe in the forsaid Vineger and wyne, and much fat will come from hir againe, and then take this fat and mire it with the first that dropped from hir. And with this vnguent annoynt the member which hath the crampe, for it is very precious, and hath vertue to seace paine, to wast consume & dry vp euill humours, and to comfort the members, if some of this vnguent be put into the vnguent, vsed in Chamęleontiasi, it helpeth very much, and doth seace the paine of that contagious sickneſſe.

Vnguentum Ioannis de Vigo, contra Chamæleontiasin.

Rec. Olei, one vnce. Vnguenti pro spasmo, two vnces. Axungię porcinæ iiij. vnces. Olibani, halfe a vnce. Euforbij, one dragme and a halfe. Vnguentum de althea, Vnguentum Agrippæ, ana j. vnce. Argenti Viui, iiij. vnces.

Let all these be beaten together in a morter of Iron or stone tyll no parte of the Argenti Viui, be seene, but see thou mortifie the same firste in a little glasse with Veneyger and salking spetteil, that it may the more easely myngle wyth the forsayde thinges, and doe lesse hurte in the working, let your Olibanum and Euphorbium be made in fine pouder, and searsed fine before you mire them with the forsayd things. Prouided alwayes that the matter antecedent be digested, & sufficiently purged, before they lay this vnguent on the body.

Aliud Vnguentum pro eadem Chamęleontiasi.

Note that this vnguent according as Nicholas Massa, and other notable writers both olde and newe doth testify, it doth heale not onely the paynes of that same contagious sickness, but also the breaking out of those that be scabbed, it resolueth harde Apostumes which is called Grumas, bunches, or harde knots of the sinowes of the armes and of o-

ther

ther places, also it healeth vlcers of euill curation or harde to be cured. This vnguent must be applied vppon the legs, the armes, and vppon the ioyntes, chiefly in the hammes in the bowing of the armes, the wreste of the handes, the wreste of the foote, & the soles of the feete. Also you must annoynt the sores therewithall, but beware yee lay not this vnguent nigh the principall partes: as the breaste and the stomacke, but you may annoynte the shoulder blades, the buttockes with it, & if neede be yee may lay a little on the foreheade, and this is the making of it.

Rec. Axungię porcin the little skinnes taken from it without melting of the fire. ij. pounde.

Argenti viui, ij. pounde. Lytargyri, iij. pounde. Ceruse, iij. vnces. Olibani, j. vnce.

Myre all these together, and make thereof an vnguent, in a morter, but firste of all you must beate the swynes grease & the Argentū viuū together very strongly, then put in the other thinges in fine pouder, and labour it wel with your pestell vntill it be so fine that none of the Argentum viuum be seene. Note that this vnguent is the chiefe matter of all the curation of this disease, for because you may mixe other medicines, with this medicine according to the diuersitie of the sickenes that the patient hath: as for example. If the sickenes came with hard swelling, adde Capons grease, Duckes grease, or Goose grease, and sometime you may adde all these thinges, and sometime one, as you see cause, for with their hotnesse and moistenes they doe resolue the hardnesse, and so comforte the hurte member, and if it chaunce that there be swelling with great paine, you may adde Dyle of Lilies, of Bayes, of Dill, and Turpentyne, either one of them, or moe as yee see cause, for they be stronger in operation, and their vertue is greate.

And if the desease be maligne or Virulent, that the Patient may not bee altered or holpen with a lyghte medicine, put in more of the Argentum Viuum, and adde thereunto Aqua vitę, Sage, Stichados, Treacle, Myrrhe and Masticke.

It is to be feared of excoriation that may come by the strength

strength and corrosion of the Argentum vinum. Therefore we correct this vnguent with Lythargiri and Cerusa, as we haue written here before in this vnguent. And as you doe finde diuers things added vnto this vnguent, so doth it remoue diuers accidents and sicknesses. But beware you minister not this vnguent without discretion, for euen as it doth helpe this contagious disease being rightly vsed, so being vsed without discretion, it doth kill and destroy.

Prouided alway that this be not ministred without purgation and digestion of the mattier antecedent. The pacient may not goe abroad after his sweating, vntill such time as his mouth be whole, and must vse good lotions, or washings for his mouth, vntill it be whole.

Tertium vnguentum pro Chamęleontasi.

Rec. Laureolę, Absinthij Fumarię, Centaurij. ana. m. ſ. Euphorbij, Elebori albi. ana three dragmes. Colocinthidis, two dragmes.

Boyle your herbes, your pouder and Coloquintida altogether, your herbes being a little bruſed in a morter, and your Coloquintida broken in ſmall pæces, in one quart of good Malmiſie, till the halfe be conſumed, then let it ſtand a day and a night infuſed, and ſtraine, it and ad therevnto: Succi Rutæ, Saluiæ, Ebuli. ana two vnces. Then take Axungiæ. xij. vnces. Ping. Anatis, Caponis. ana. iiij. vnces. Oyle de Bay. vj. vnces. Lithargiri auri, Olibani. ana two vnces. Maſtiches, Aloes cicatrinę, Scammoniæ, ana halfe an vnce. Argenti viui. viij. vnces.

Make all thoſe things that are to be made in pouder, in fine pouder, and mortifie your Argente viue, with faſting ſpetle, or with iuiſe of Limons. Then beate all your foreſayde things together, putting in your iuiſe and your decoction together by little and little, continually labouring it in a morter, vntill it be brought to a perfect vnguent.

This vnguent muſt be applied vppon the legs, & armes as other vnguents be that ſerueth for the ſame diſeaſe. And if you will haue them more laxatiue, anoynt the nauill therewith. It taketh away apoſtumes, vlcerations & breaking

king out of the bodie, and dolour and paines springing of the same sickneſſe.

Aliud vnguentum pro eadem Chamæleontiasi.

Rec. Maceris, Cinamomi, Gariophil. ana, halfe an ounce, Granorum paradisi, two dragmes, Foliorum rosarum rub. Corticum limonum, ana, fiue dragmes, Nucum muſc. numero foure.

Let all these be beaten together and laied in steepe in Rose water the space of one daie and one night, then put vnto the same water and spices, of swines greaſe and newe suet fiue pound. Boile them together vntill the water bee consumed, and straine it. Then take of the same ii. pound, Argenti viui, seauen ounces, Olibani, two ounces, Masticches, Ceruſæ, Lithargyri, ana, one ounce and a halfe, Sœchados, Myrrhæ, ana, halfe an ounce.

And in the ende put of Muſke reſolued in Dyle of Roſes, halfe a Scruple. And let these bee mixed together, and make thereof a fine vnguent according to arte, as is afore-sayde. And this vnguent is for rich and delicate persons, and is also meruailous in operation, and muſt bee vſed as these are, which serueth for the same infirmitie.

Vnguentum Aegyptiacum.

Rec. Mellis, two pound, Aceti fortis, one pound, Viridis æris, foure ounces, Aluminis, three ounces.

Boile all these together on a softe fire, vntil it be red, for if you boile it too much, it wil bee black, and if you boyle it too little, it will bee grene: Therefore when it is boyled inough, it will be perfectlie redde. This vnguent I haue found greate profite in to mundifie sores, for it taketh away rotten fleſh without anie great paine, it doeth also profite much in Fiſtules, and hollowe vlcers, if it bee mingled with some conuenient liquour, and conueyed in with a firing. It doeth also abate and take awaie spoungeous fleſh both in woundes and in vlcers, and maketh them come to easie

cicatrisation, and this vnguent is much praised, both of the olde writers, and of the new, in many other things.

Vnguentum Dialtheæ.

Rec. Radicum altheę, two pound, Sem. Lini, Fœnogræci, ana, one pound, Olei communis, foure pound, Cerę, one pound, Terebinthinæ, Galbani, ana, foure ounces, Gummi hederæ, two ounces, Colophonij, Perrosin, ana, halfe a pounde.

Wash your rootes cleane, and bruse them in a morter, and bruse your Linesæde and Fenegræke also, and put therevnto of Scilla bruised, halfe a pound, put vnto all this eight pintes of water, and let them stand thræ dayes, and the fourth daie boile them on the fire till they beginne to ware thicke. Then put them into a pot, and when you wil straine it, put thervnto some hot boiling water, that it may the better be strained, then take of this muscilage or straining two pound and a halfe, and put vnto your Oyle & forzelayde, and let them boile vntill the muscilage bee consumed. Then put therevnto your Ware, your Turpentine, your Galbanum and Gumme Edere, dissolued in Vineger and stained, then your Perrosen molten with a little Oyle of Lillies, and last of all put in your Colophonium in fine Pouder, continuallie stirring all these together til they be colde, and so kæpe it.

This vnguent called Dialthea, is a speciall remedie for all paines of the breast that commeth of colde, if the breast be therewith all anointed, and warme clothes layed thervpon. It is good also for the Pluriſie, and it doeth resolue and mollifie, which are required in both these diseases. It is good also for shrinking of sinnewes and tendons, and also for crooked ioyntes, for it mollifieth and supplyeth them gentlie, so that it maketh them easilie to stretch forth agayne. Manie other good properties it hath in doing of such lyke thinges.

Vnguentum deſiccatiuum Rubeum.

Rec. Lapidis Calaminaris, Terræ ſigillatæ Rubeæ, ana, foure ounces, Lithargyri auri, Ceruſæ, ana, three ounces, Camphoræ, one dragme, Ceræ, fiue ounces, Oleorum Roſatum, Violarum, ana, vj. ounces.

Waſh your Lapis Calaminaris, Litharge, and Ceruſe, and drie them againe, and make all theſe in verie fine pouder, that is to be made in pouder, then melt your Oyles with your Ware, and in the coling put therein your Pouders, continuallie ſtirring it with a ſplatter vntill it bee colde, and ſo keepe it to your vſe. Some doe adde vnto this vnguent Oyle of Nenuphar, one ounce, Olibanum & Maſtike, ana, one ounce, and if you do ſo, it is the better.

This vnguent is verie good to drie vp vlcerations, and chiefelie of the legges, after that they be mundified, and the fleſh well incarnate, for otherwiſe it profiteth not, for it ſerueth for no other purpoſe, but onelie to drie, and defend humours, and to make perfect cicatriſation.

Oleum Roſatum.

REc. Olei communis, foure pound, Roſarum rubrarum purgatarum, xvj. ounces.

Macerate them, and let them ſtand in the Sunne eight daies, then take out the Roſes and ſtraine them. After put in newe Roſes, and let them in lyke manner ſtand eight daies, and ſtraine them as afore. And doe ſo the third time, and reſerue this to thy vſe. Some vſe to let the Roſes remaine in the oyle the laſt time.

It doth refrigerate and is aſtringent, and helpeth inflammations in the partes of the bodie, and it ceaſeth the corroſion of the inteſtines miniſtred in Cliſters, and healeth the paine of the teeth, they being waſhed therewith.

Oleum Rosatum completum Mesuæ.

Rec. Olei ex oleis maturis, aqua fontana multoties loti quantum voles.

Put into this oyle of redde Rose leaues so many as you shall thinke conuenient, set these in the Sunne eight dayes, then boile them in a double vessell on the fire three hours. Then straine them. And after take new roses, and doe as afore is said. And doe so also the third time. After put to the fourth part of water of the infusion of Roses, and let them stand in the Sunne fortie daies. Then straine it and againe put to the iuyce of Roses, and let it stande in the Sunne.

It doeth strengthen the partes of the bodie, it resolueth, and ceaseth dolour.

Oleum Rosatum Pauli.

Rec. Rosarum exemptis vnguibus, three ounces, Olei omphacini, sixe ounces.

Put these in a glasse and stop them well that they breath not out, and let them stand in the Sunne fortie daies. Other doe not set the glasse in the Sunne, but hang the glasse in a Well neere to the water, for the space of fortie daies.

It doth extinguish inflammations, it doth corobrate, restraine, and cease flures, it kæpeth backe the humours which floweth through the bodie, &c.

Oleum Rosatum omphacinum.

Rec. Olei Oliuarum immaturarum loti, one pound, Rosarum rubrarum purgatarum, foure ounces.

The Roses being bruised and mired with the Dyle, put them in a glasse, and doe as is afore sayd in the composition of the other oyles, and chaunge your roses three times.

The vertue of this Dyle is all one with that which is mentioned before.

Oleum

Oleum Chamæmelinum Populi.

Rec. Florum Chamęmeli, demptis folijs albis, iiij. ounces, Olei oliuarum two pound and a halfe.

The floures must drie in the shadowe 24 houres, then put them with the oyle into a glasse with a narow mouth, being well stopped, and let it stande in the Sunne forty daies.

It is of right good effect in the passions of the ioynts, and for the Collike, and many other infirmities, for it doth repell and moderatlie digest.

Oleum Cydoniorum Mesuæ.

Fiat ex carne Cydoniorum præmaturorum cum cortice. Succi Cydoniorum, ana. vi. ounces, Olei oliuarum immaturarum, iij. pound.

Put all in a glasse well stopped, and let it stand fifténe daies in the Sunne. Then boile it by the space of foure houres on the fire in a double vessell. Then straine it and presse out the iuyce. Then put new into the Oyle, and set it in the Sunne, after boile it, and expresse it as afore, and do so the third time, and reserue it to thy vse.

It doth refrigerate, and stayeth flures, and doeth also strengthen the belly and nerues, being applyed vnto them, &c.

Oleum populeon Nicolai.

Rec. Olei, vij. pound, two ounces, Vini, iiij. pound, Gemmarum Populi arboris recentum, three pound.

The buddes of Pople must be bruised and macerated in Oyle and Wine, the space of seauen dayes. Then boyle them in a double vessell vntill the wine be consumed, then straine it and reserue it to thy vse.

It helpeth paine in the head, in the ioyntes, and is good against the gout, and whereas dolour and paine is, &c.

Oleum Nardinum compositum Mesuę.

Rec. Nardi Indicæ, foure ounces, Sampsuchi, id est, Maioranę, two ounces, Ligni Aloes, Enulæ, Folij indi, Calami aromatici, Foliorum Lauri, Cyperi, Schœnanthi, Cardomomi, ana, one ounce & ſe.

Bruſe all theſe, and put to it of Vini, Aquæ, ana. q. ſ. Olei loti, vi. pound.

Let them be macerated twelue houres together. Then boyle them in a double veſſell, and make an oyle according to arte.

This Oyle doth heate, attenuate, and digeſt, wherefore it is right good in all colde and windie infirmities of the braine, ſtomacke, liuer, ſplene, reines, bladder, and matrice. It doth alſo cauſe good coulour of the bodie, &c.

Oleum Sampſuchinum.

Rec. Foliorum Sampſuchi, id eſt, Maioranæ, m. iiij. Serpelli. m. ij. Foliorum Myrti, m. i. Abrotoni, Siſymbrij ſeumentæ aquaticæ, ana. m. halfe, Cacię, two ounces, Olei omphacini, quantum ſufficit.

Cut and bruſe the hearbes, and put them in a glaſſe, and ſet this glaſſe in the Sunne eight daies. Then ſtraine it, which done, put other new parcelles, and boile it againe and ſtraine it, and doe this the third time.

It helpeth laſſitude and wearineſſe, and is right comfortable in paſſions of the braine and nerues. Therefore the ſpine of the backe being annointed with it, it helpeth the Palſie and Crampe, and is good againſt the ſting of Scorpions, &c.

Oleum Hyperici magiſtrale.

Rec. Olei veteris, foure pound, Vini albi petentis, one pound. Florum Hyperici cum ſeminę recentium, m. iiij.

Bruſe the flowers and macerate them in the wine and oyle,

oyle, being put in a glasse well stopt two daies. Then boile them, straine them, and put in flowres to them. This do thrice, then put to euerie pinte of this of Terebinthinæ, vj. ounces, Absinthij, three vnces, Dictamni, Gentianæ, Cardui benedicti, Tormentillæ, Carlinæ, Calami aromatici, ana, two dragmes, Lumbricorum in Vino pluries Lotorum, two ounces.

Bruse all and let them stand in the Sunne foztie daies, and stop the glasse well, and receiue it to thy vse.

It hath the vertues with those going before, and is of more force in the same infirmities, &c.

Oleum Castorei magistrale.

Rec. Castorei, Styracis calamiæ, Galbani, Euphorbij, Casiæ, Croci, Opopanacis, Carpobalsami, Spicæ nardi indicæ, Costi, ana, two dragmes, Cyperi, Schœnanthi, Piperis longi, Piperis nigri, Sabinæ, Pyrethi, ana, two dragmes and a halfe, Olei, foure pound, Vini, two pound.

Dissolue the Opoponax and Galbanum in some parte of the wine. Then bruse the other things, and put them to the Oyle and the rest of the wine, and boile them vntill the wine be consumed, then straine it and put the Gums and Wine in which they were dissolued to it, and boyle them together vntill the Wine be consumed, and reserue it to thy vse.

It is a singular remedie for all colde passions, especiallie of the ioyntes and neruous partes. It healeth the Palsie, Crampe, and rigours in Feauers, if you anoint the backe with it, &c.

Oleum Costinum Mesuæ.

Rec. Costi, two ounces, Casiæ one ounce, Summitatum sampsuchi, viii. ounces. Vini quantum sufficit, Olei oliuarum three ponnd.

Bruse these and macerate them two daies, then boyle them in a double vessell vntil the consumption of the wine &

reserue it to thy vse, &c.

It openeth obstructions, helpeth the sinnowie partes, muscles, tendons, and ligaments. Also the stomacke and liuer, and helpeth much to the increasing of good coulour in the bodie, &c.

Oleum Papeuerinum.

Rec. Capitum papaueris, Foliorum papaueris, Florum papaueris, ana, partes æquales, Olei quantum sufficit. Put these in a Glasse, and let them stand seauen daies in the Sunne, then straine them, and put new to the Oyle, this doe three times.

It taketh awaie hot distemperance, and paines and griefe springing thereof.

Oleum Lumbricorum.

Rec. Lumbricorum terrestrium, halfe a pound, Probè lauentur in vino, deinde immitantur in olei rosati omphacini, ij. pound, Vini, two ounces.

Boile all in a double vessell vnto the consumption of the Wine, then straine them, and reserue it to thy vse.

It cureth the colde passions of the nerues, and is profitable for dolour and paine of the ioyntes, &c.

Oleum Balsami Petri de Ebeno.

Rec. Myrrhæ, Aloes, Spicę nardi, Sanguinis draconis, Thuris, Mumiæ, Opoponacis, ana. two dragmes, Carpobalsami, Bdellij, Hammoniaci, Sarcocollę, Croci, Mastiches, Gummi arabici, Styracis liquidę, ana, two dragmes, Ladani, Castorei, ana, two dragmes and a halfe, Mastiches halfe a dragme, Terebinthinæ ad pondus omnium.

Bruse those that are to bee brused, and mixe them together, and distill them in a Glasse or Limbecke according to arte.

It is of great force and strength against those infir-

mities

mities, which spring of colde causes &c.

Oleum Balsami Brunswicensis.

Rec. Ligni aloes, two vnces. Opopanacis, Resinæ de Pino, Bdellij, Galbani, Ammoniaci, Masticches, Sarcocollæ, ana iij. vnces. Gūmi elemij, Olibani, Myrrhæ, Gummi cupressi, Olei Laurini, Olei Benedicti, Laudani, ana. ij. ʒ. Carpobalsami, Xylobalsami, Opabalsami, ana. j. ʒ. Sanguinis draconis, halfe an vnce. Castorij, Spicę nardi, Cububę, Maceris, Cinnamomi, Granorum paradisi. Corticis citri, ana. j. dragme. Olei Terebinthinæ, omnium pondus.

Put all these together, and distill them by a Glasse limbecke, and reserue it to thy vse.

This is the Baulme wherewith greene & fresh wounds are speedilie cured and healed, and it hath meruelous vertues as shall appeare to him that putteth it in practise.

Balsamum viride nostrę inuentionis.

Rec. Olei Rosarum, one pounde and a halfe. Put it in a panne, & put thereto Rorisemarinę, Capharę, ana iij. vnces.

Let them be brused before you put them in, then take, Malicorij, one vnce, and a halfe. Ligni vitę, two vnces.

Being made in fine Pouder then boyle all these together the space of an howre, straine them and put to the straining.

Terebinthinę, one pounde. Aqua vite iiij. times stilled, one pounde put into your aqua vite. Aloes Cicotrinæ, one vnce. Rubarbarę, one vnce and a halfe.

Let these be made in fine pouder and let it stande two dayes infused, then straine it, & put the Aqua vite so strained to your oyle and Turpentine aforesaide, then set it on the fire and let it boile a little, till the most parte of the Aqua vite be consumed, then take the pouder of Masticches, Olibani, ana. iiij. vnces, Viridis eris, Lumbricorum pulueriſat, ana. ij. vnces.

Washe your wormes first in White wine, then boyle all these

these thinges together a little space, then take it from the fire and sturre it till that it be colde, and so vsed according to arte.

Balsamum artificiæ Lullij.

Rec. Terebinthine, one pounde, and a halfe. Galbani, two vnces. Aloes cicotrinę, Mastiches, Caryophil, Galangæ, Cinnamomi, Nucum muskat, Cubebarum, ana, one vnce. Gummi hedere, halfe an vnce,

When all these are well beaten, mixe them and distill them in a Limbecke of glasse with a slowe fire first, & receiue the first by it selfe seuerally: then increasing the fire, a water somewhat reddishe will come, and after increasing it more, an oyle of redde colour, and so doe till nothing run any more, chaunging the receiuer thrise. This oyle hath all the vertues of true baulme: for it sinketh in the water, and curdeth milke by and by: for if one droppe of it warme be put into a pinte of milke, it shall forthwith become curded. The first liquor is called water of baulme, the second oyle of balme, the third baulme artificiall. The first is profitable against the running of the Eares, if two or three droppes morning and euening be put into them, also dropt into the Eyes, it amendeth the bleardnes, and consumeth the teares, it doth marueilously restraine superfluous humours in any parte of the body. It taketh away the tothach, if they be washt therwith, and kill the wormes if there anie in them. The third liquor will suffer no venim, for it is an vtter enimie and destruction to Spiders and Serpents, two or three drops being let drop in anie venimous biting, doe make it whole straight. If thou drawe a circle with this liquor, and shut a venimous beast therin, it shall die rather than goe out of it. To be short, it doeth all the same things that Triacle doeth, but more effectuallie all things. Being poured or put vpon anie Apostume, within nine daies, it healeth them, and likewise a Fistula, bee it neuer so ill, and also Noli me tangere, all diseases bredde of fleame and colde humors, it healeth them, if a linnen cloth dipped in it be laide vppon the place where the greefe is, it putteth awaie vtterlie the palsie, & all trembling of mem-

bers,

bers, it strengtheneth mervailously the stomakes, it is hotter than the first and second, if a man put a drop of it in his hand, it pearceth without great griefe. To conclude, it doth many other things, and all diseases risen of a cold cause, it healeth them, if they use it right according to art. All this is Lullius saying.

Aliud Balsamum Dorantij.

Rec. Ammoniaci, Opoponacis, Resine pine, Bdellij, Masticches, Galbani, Gummi eleme, Olibani, Myrrhe, Sarcocollæ, ana, halfe an ounce, Xylobalsami, one ounce, Olei benedictæ, Laurini, ana, j. ℥. & ℈. Balsami Gul. Placentini, halfe an ounce. Sanguinis draconis, Laudani puri, ana, two dragmes, Spicæ nardi, Castorij, Galangæ, Cubebarum, Cinamomi, Cardomomi, Granorum paradisi, Corticis citri, ana, i, dragme, Olei Terebinthinæ, ad pondus omnium.

Let all those be made in pouder that are to be made in pouder, and the gums that cannot be made in pouder, let them be cut in small peces, and put into a Glasse vessell with the oyle & balme afore sayd, & let them lie in steepe ix. dayes, then distill them in Balneo Mariæ, the space of foure houres, then let them stand seauen dayes more, and distill them againe, as is afore sayde, then straine them. So haue you a precious Balme, which you may keepe to your use, for the curing of woundes, both in the similer and instrumentall partes.

Balsamum ex intestinæ terræ, nostræ inventionis.

Rec. Lumbricorum halfe a pound, put them in white wine to purge them one daie, then slit them and make them cleane from all earthie mattier, then stampe them smelle, and put to them one pinte of good Walmsey, and one quart of Oyle of Iuniper, boyle them all together till the Wine be consumed, then straine it, and adde to the straining.

Opopana-

Opopanacis, Ammoniaci, ana. j. vnce. Gummi Arabici, foure vnces. Dissolued in bilsiger accerding to arte, Mastiches, ana. j. vnces and a halfe. Myrrhę, Sangdraconis, ana. j. vnce. Olei Hipericie, Terebinthinę, ana, vj. vnces. Boracis, iiij. vnces. Aqua vite fortissime, iij. vnces and a halfe, Croci, j. dragmes. Terebinthinæ, xij. vnces.

Boyle all these together in a bodie of glasse, in Balneo marię, vnto the wine and Aqua vite be consumed, then let it stand twentie dayes infused, & after that boyle it againe two howers and so straine it, and keepe it to your vse.

This Baulme is most precious in woundes of nerues & tunicures of all other.

Balsamum ex Croco nostre inuentionis.

Rec. Foliorum consolide maioris, Cōsolidę minoris, Marrubie, Cetaurij, Hiperice, ana. M. j. Florum Ronsmarini, Chamamille, ana. M. ſ.

Let your flowers and herbes be drie and grose beaten, & put to them one pinte of Oleum Lumbricorum, and one pinte of Palmeley. Then let them boyle all together softlie, the spate of two howres in a pot verie closelie stopped, then straine it and add to the straining Mastiches, Myrrhę, ana one vnce. Olibani, Croci, ana, one vnce and a halfe. Sang. draconis, Gummi dragagant, Sarcocollæ, ana, halfe a vnce. Laudani, Castorij, Bingemi, ana. ij. dragmes.

Make all these in pouder, then adde to them Oleorum Terebinthinę, iiij. vnces, Spicę nardi, one vnce. Terebinthinę lotæ, vj, vnces.

Boyle all these in Balneo marię, according to arte. This Baulme is most precious in woundes of the breast that perceth through into the bodie, as I haue many times proued my selfe.

Emplastrum de meliloto

MESVAE.

Rec. Meliloti, vj, vnces, Florum chamomeli, Fœnigręci,

Baccarum

Baccarum lauri, Radicum altheæ, Comarum absinthij, ana. ij. dragmes. Seminis absinthij, Cardamomi, Iridis, Cyperi, Spicę nardi, Casiæ, Seminis ammi, ana, one dragme and a halfe. Foliorum persici, iij. dragmes. Hammoniaci, x. dragmes. Styracis, Bdellij v. dragmes, Terebinthinæ, one vnce and a halfe. Ficus pinguis numero, xij. Sepi hircini, Resinę Picis, ana. ij. vnces and a halfe, Ceræ, vj. vnces. Olei sampsucini, Olei nardi, ana one pound, Confice, sic Fit decoctio, Meliloti, Fœnigræci, Chamęmelij, ana. q.s.

Boile these into the consumption of the halfe, then straine them and put thereto your percells finelie made in pouder, and boile them againe adding the oyles Turpentine and Gummes dissolued in viniger. Then put to the rootes and figges being well brused and well boiled together. And mixe all these together and make an emplaster according to arte. It doth mollifie all hardnes of the stomacke, liuer, splene, and other intrailes. It doth also cease vehement dolour and paine. And healeth flatulentnesse of Hypocondria, &c.

Dia Meliloton Andromachi ex Galeno.

Rec. Nardi gallicæ, Cyperi, Iridis, Myrrhæ, ana. viij. dragmes. Croci, iiij. dragmes. Meliloti, xxv. dragmes. Hammoniaci, Terebinthinę, ana, one dragme. Cere, one hundred dragmes. Olei Cyprini, sixe vnces. Aceti, q.s. Fiat emplastrum.

This emplaister is of like vertue with that which is next before discribed &c.

Emplastrum ex fermento Democriti ex Mesue,

Rec. Mellis, Fermenti, ana, one pounde, Visci quercini, foure vnces, Hammoniaci in aqua fœnigræci, ant. lacte mori arboris, three vnces. Fecis olei veteris q.s. Fiat emplastrum.

This emplaster is of great vertue in drawing out thornes and thinges in any place. Also in taking out the bones broken of Cranium fractured, yea although they be fixed in Dura and Pia mater.

Aliud simile.

Rec. Fermenti, Mellis, Olei Communis, Lactis muliebris, Vitelli ouorum, ana one dragme. Fiat Emplastrum.

It doth digest and maturate inflammations, and breaketh apostumes. And if to this receit you ad Bdellium & Farina hordei, it draweth out thornes fixed: yea, & so much the better if you put to it of Galbanum, dissolued in vineger. &c.

Dia Chalciteos Galeni, palmeum vnguentum dictum.

Rec. Axungię porci veteris a membranis per Liquationem & Colationem purgatę. two pound. Olei veteris, Lithargiri triti. ana three pound. Chalcitidis vstę, foure vnces.

Boyle all on the fire and stirre them with a stick new taken off the Date træ, (you may in the place hereof vse a sprig of the Oke) and when as it is well nęere boyled, adde thereto of the tender croppes of the Date træ new gathered and cut small, foure ounces, (you may in the place hereof vse the young buds & twigs of the Oke) boyle all these vnto the thicknesse of a Cerote.

This is right good against gręne wounds, pestilentiall tumours, apostumes, burnings, ruptures, contusions, and ecchymomata. &c.

Diachilon Mesuæ primę discriptionis.

Rec. Mucaginis Seminis Fœnogręci, Mucaginis Seminis lini, Mucaginis Radicum altheæ, ana. i. vnce. Lythargyri, one vnce, and a halfe. Olei antiqui clari, three vnces.

The Lytharge must be made in most fine pouder, and tempered with the Dyle. Then boyle them on a soft fier, styring them alwayes with a style, vntil they be wel boyled, and incorporate together. Then put to your muscilages and boyle them againe vnto a sufficient thicknesse.

It is good against scyrhous of the Lyuer, Spiene, Stomacke, and other parts, it mollifieth all hardnesse. &c.

Alij addunt pulueris iridis, Mucaginis Meliloti, Ana, one ounce.

Then

Then it doth more vehemently resolue and maturate, and is a greater ceaser of dolour and paine.

Alij Olei veteris loco accipiunt.

Rec. Olei Chamęmelini, Olei Irini, ana, one vnce & a halfe. Pręstantius quoque fit, Addes etiam si voles. Galbani, Hammoniaci Sagapenj, ana partes æqua. Diachylon gummatum vulgus appellat.

Emplastrum Diachylon magnum Mesuę.

Rec. Lythargyri, one pound. Olei Chamęmelini, Olei Trini, Olei Anathini. ana. viij. ℥. Mucaginis, Seminis leni, Mucaginis fœnogręci, Mucaginis Altheę, Mucaginis Ficū pinguiū, Mucaginis Vuarū passarum, ana, ℥. xij. se. Succi, Iridis, Succi, Scillę, Succi Oesipi, Succi, Ichthyochollę, Ana dragmes. xij. se. Terebinthinæ, three vnces. Resini pini, Ceræ flauæ, ana two vnces. Fiat ceratum vt prius.

It doth digest and molifie all hardnesse, & therefore may with great profit be appleed vnto schirrhous, and all other inflammations and tumours. &c

Emplastrum Diachilon paruum Mesuæ.

Rec. Lithargyri, vj. vnces. Olei veteris, one pound. Mucaginis Psillij, iiij. vnces. Mucaginis Seminis lini, Muccginis Radicum altheę ana, two vnces. Fiat vt primum.

It doth digest and maturate tumours and apostumes, which be hot. &c.

Emplastrum ex alijs Aetij.

Rec. Ceræ, two pound. Picis Grecæ, Medullæ ceruinę ana, vj. vnces. Nitri albi. viij. vnces. Olei, foure poūd. Allia, num. xx.

The Garlike being pilled, boile it in oile. Then straine them, and adde to it Mare, then Nitrum, & make an Emplaster according to arte.

It is

It is of vertue against all hardnesse, apostumes, felons, bubones, fistulas, impetigines, humidas, and hardnesse of the pappes.

Emplastrum ad vulnera recentia, Called in the Enchiridion, the greene wounde plaister.

Rec. Resine, e Pino, Cere virginee, ana, ij. pounde. Resine, Seui ceruini, ana, xij. vnces. Colophonij, viij. vnce. Sarcocolle, iij. vnce. Terebinthine, halfe a pounde. Masticches, Olibani, ana. iiij. vnces. Dragacanthi, Gūmi arabici, Galbani, Ammoniaci, ana, one vnce, and a halfe. Storacis calamite, ij. vnces. Storacis liquide, foure vnces. Succorum Pyrolę vtriusque Saracenice, Diareusie, Veronice, Solisequij, Consolide minoris, Arthemisie, Plantaginis vtriusque, Betonice, Agrimonie, Matrisilue, Cerefolij, Saluie, Verbene, Pilosille, ana, three pounde.

Boile the iuses of these herbes, with the Ware, Rosine, Colophonium, and hartes suet on a softe fier, with coles vntill two partes bee consumed. Then put to it Turpentine, and the gummes being dissolued in vineger of Roses and let them boile a space. Then put to it Stirax liquida, and Calamita, and if you will haue it sweete smelling you shall adde Moschi, ij. scruples. Straine these through a cloth and let it stande a night, and the next day make it in rolles with oyle of Roses. But if you will haue the plaster greener, put to it Succi Solatri, Sambuci, Chelidonij, ana. three pounde. And boile your Plaster againe therewith, but not long.

This is an excellent Plaster in all greene and freshe woundes. For it doeth mundifie incarnate and consolidate without maner of tentes, it is of merueilous vertues, and therefore had in these dayes in more frequent vse. There be diuers compositions: but in my opinion this is the best.

Emplastrum Iudaicum, called the Iewes Plaster.

Rec. Cerę albæ, foure pounde. Resine de Pino, Resine Terebinthine, ana, two pounde. Olei rosati, one pounde. Masticches,

stiches, Olibani, Myrrhæ, ana two ounces. Rosarum Recentiu, iiij. ounces. Vini rubei, iij. pound. Succorum pirolæ, Dipensie, Matrisiluæ, Saracenice, Herbæ tunici, Solisiesquij, Bethonice, Consolidæ minoris, Fumariæ, Plantaginis vtriusquæ, Valerianæ, ana, q.s.

Bruse the hearbes, and take of the iuyces, and put to the wine, and boile them on the fire a good space. Then straine them, and put to it so strained, Ware, Turpentine, Rosen, and Dyle. Then seeth the Roses, after straine them, and put them in a kettle, and seeth them fiue or sixe houres, then take it from the fire, and let it bee colde. The next day following melt it againe, and adde to it Mastike, Frankensence, and Myrre, and suffer it a little to boile together, after let it cole, and make it in rolls.

This emplaister hath the lyke vertues that the other going before. For it doth mundifie, incarnate, & consolidate all greene and fresh woundes, and healeth them without Tentes.

Emplastrum attractiuum Brunswicensis.

Rec. Apostolicon Nicolai, two ounces, Magnetis orientalis, halfe an ounce, Pinguedinis leporinę, Olei canibus, ana, ʒ.ß

Melt the oile and Hares grease together, and then put to it the parcells abouesaid, and make therof an emplaister according to arte.

This Emplaister is much praised in drawing out anie yron fired in woundes, as arrowe heades, maile, shotte, or such lyke.

Emplastrum Gratia Dei vocatum.

Rec. Terebinthinæ, halfe a pound. Resine, one pound, Cerę albæ, foure ounces, Mastiches, fiue ounces, Betonicæ, Verbanę, Pimpenellę, ana. m. j.

Stampe your hearbes in a morter, and put them into a quart of white wine, and boile it well till the third part bee

consumed, and that it haue taken the strength of the hearbs, then put in your Mare, Rosen, and Mastike, into the iuyce and wine, and let them boile on the fire vntill the licour bee consumed, euer stirring, and then take it off the fire, and put in the Turpentine, and boile it till it come to the forme of a plaister, euermore stirring it well.

This plaister is good for wounds that be cut or bruised, & for broken bones, and ioynts that hath bene out, and for ach and paine that commeth of colde.

Emplastrum de Minio.

Rec. Olei rosati, one pound and a halfe. Vnguenti Populei; Olei Myrtillorum, ana, foure ounces. Pingued. Caponis, two ounces. Sapi vitulini, Vaccini, ana, halfe a pound. Axungiæ, seuen ounces. Lithargyri auri, Argenti, ana, three ounces and a halfe, Minij, Ceruse, Terebinthinæ, ana, foure ounces. Ceræ, that is sufficient.

Let all these be boiled together till it be blacke, & make thereof a plaister according to art. This plaister is good for olde sores, and is the experiment of Ioannes de Vigo.

Emplastrum Triapharmacum.

Rec. Olei communis, foure pound. Lythargiri auri, two pound. Aceti fortissi. halfe a pound.

Make hereof a plaister according to arte, Emplastrum Triapharmacum is good to make flesh grow in wounds, and to consolidate and heale them.

The making of the white Muscilage plaister, called Diachilon paruum.

Take first your March mallowe rootes and wash them, and picke them verie cleane, then slice them, and take forth the pith, and cast it awaie, and cut the other in small peeces, then stampe them in a morter, and put two pound of that same you haue stamped into a new earthen pot, with foure

ounces

ounces of Linesede, and foure ounces of Fenegréeke sede in grose pouder, then put vnto them one quarte of white wine, and one quart of water, and sturre it well together, & let the water be boiling hot. Then let it stand foure or fiue daies, til it come to perfect muscilage, euerie day stirring it, then straine it, and so you haue your Muscilage.

Then take Litarge of Lead in fine pouder, searsed thorough a fine cloth, fiue pound, common oyle foure quartes. Then boile the oile and Litarge vppon a soft fire till it fall to a plaister, & then take a pint of your muscilage, & put it in by little, & little least it run ouer the pan, and alwaies stur it, so doing til you haue put in one quart of your muscilage, and so sturre it a little space after till it beginne to ware colde, then put in the rest of your muscilage, when you perceiue it will not runne ouer the pan, and so continuallie labour and worke it till it be verie white, then make it vp in rolls, and kéepe it to your vse.

Emplastrum muscilagineum ad Resoluendum humores in tibijs.

This plaister was deuised for king Henrie the eight, to amend the swelling in his legges.

TAke the rootes of March mallowes, wash and picke them cleane, then slit them, and take out the inner pith, & cast it awaie, and take the vpper faire white part, & cut them in small peeces, and bruse them in a morter, and thereof take one pound and put them in a new earthen pot, & adde thereto of Linesæde and Fenegreek, ana, two ounces, a little bruised in a morter, then put thereto Malmsey and white wine, ana, a pint, and stirre all together, and let them stand infused two or three daies, then set them ouer a soft fire, & stirre it well till it ware thicke and slimie, then take it off, and straine it through a new canuas cloth, and thus haue you your Muscilage redie, & thē to make your plaster. Take fine oile of roses, a quart, & wash it well with white wine & rose water. Then take the oile cleane from the water and wine,

and set it ouer the fire in a brasse pan, alwaies stirring it, and put thereto the pouder of Lithargyri auri, Lithargyri argenti, ana, eight ounces. Ceruse, sixe ounces, Corallo rub. two ounces, Boli armoniaci, Sangui. draconis, ana, one ounce.

And in anie wise make them in fine pouder searsed, then put them into the oile ouer the fire, alwaies stirring, and let not the fire be too bigge for burning of the stuffe, and when it beginneth to ware thicke, then put in of the sayde muscilage v. ounces, by little and little at once, or else it will boile ouer the pan, and when it is boiled inough, ye shall perceiue by the hardnesse or softnesse thereof, if thou drop a little of it on a dish bottome or cold stone, then take it from the fire, and when it is neere colde, make it in rols, and lap them in parchment, and kæpe them to your vse.

Emplastrum pro Chamęleontiasi nostre inuentionis.

Rec. Axungiæ, two pound. Aquarum rosarum, Plantaginis, foure ounces.

Wash it well vntill the waters be consumed in the said grease, then let it stand the space of fouretæne daies, then put it in a pan ouer the fire, and adde to it Oleum Rosarum, one pound. Minij, two pound, Aceti optimi, one pinte.

Let the barkes of Elme remaine in the vineger foure daies infused, make hæreof a plaister according to arte. This is a good plaister for scabs or biles, and for sore legges, and many other things, for it mollifieth and healeth gentlie, and taketh awaie paine. This plaister I did vse much in ill scabs of Chamęleontiasi, after they were mundified with Mercurie precipitate. And also in swelling of ioyntes, and in the gout, and with this plaister I did great cures after the bodie was well purged, and if thou wouldest haue it to heale an olde sore, thou must put in a little Coperasse in Pouder into the Vineger, and so boyle it according to arte.

Emplastrum Cerusæ.

Rec. Olei rosati, two pound. Axungię lotę in aqua rosacia & vino, one pound.

Ceruſæ puluerisatæ, foure pound, Ceræ albe, eight ounces.

Melt your Ware with your Oyle and Hogges greaſe, then put in your Ceruſe in fine pouder by little and little, and ſtirring it, for burning to the bottome, vntill it come to the forme of a Plaiſter, the which you maye knowe by dropping some of it vppon a ſtone, or a diſh bottome, vntill you haue it according to your minde. This plaiſter is good for ſcabs in an euill hot complection, for it doth quicklie drie them and ſkinne them. If you waſh it with white wine, it will be much better.

Emplaſtrum Caliſienſæ.

Rec. Olei roſati, one pound, foure ounces. Ceræ albæ, one pound, Ceruſæ Venete pul. one pound.

Boile all theſe vpon a ſoft fire, euermore ſtirring it till it come to the forme of a plaiſter, and then take it from the fire, and in the cooling put in of Campher, two dragmes, in fine pouder, and make it vp in rolles.

This plaiſter is good to cicatriſe vlcerations, after they be well mundified and incarned. It is good to drie vp ſcabs when the bodie is well purged before.

Emplaſtrum de ſpecibus, for ach and paine in the ſhoulders, armes, or ſome other places of the bodie.

Rec. Reſinę, Pereſinę, Ceræ albę, ana, one pound. Colophonij, eight ounces, Vini rubei, two pound. Cariophillorum, Maceris, ana, one nunce. Olibani, foure ounces, Maſtiches, ij. ounces, Myrrhę, one ounce. Croci, halfe an ounce.

Make thoſe in fine pouder that are to bee made in pouder, and boile your Roſen, Perroſen, and Ware, with foure ounces of Deare ſuet, and ſtraine it thorough a Canuas cloth. Then ſet it on the fire againe vntill it boile, and when it boyleth take it from the fire, and put in your pouders, and ſtirre it vntill it bee colde, and in the cooling, put in the red wine, & labour it together, and make it vp in rolls: & if you adde vnto this one ounce of the leaues of Rue, dried &

made in fine pouder, and fullie searsed, it is then good for Sciatica, and other cold sicknesses of the ioynts, if the body be wel purged before with pills of Hermodactolior, or other purgations méete for the same purpose, &c.

Emplastrum Ianuasence.

Rec. Succi plantaginis, Betonicę, Apij, ana, one pound. Picis, Perrosine, ana, one pound. Cerę, two pound. Terebinthinę, foure ounces. Rorismarine pulueriſatę, two ounces.

Melt your Pitch, Rosen, Waxe and Turpentine, togegether with Olei Ienupere, two ounces. Then put in your pouder of Rosemarie leaues, stirring it verie well, then put in your iuyce by little and little, euer stirring it continuallie vntill it be colde, and so make it vp in rolles, and kéepe it to your vse.

Emplastrum nigrum I. de Vigo & D. Buttes, for blisteriug, burning, ach, and excoriation, comming of hot humours, and for all hot vlcerations.

Take vnslacked Lime, and quench it in water seauen times, and in white wine two times, then take of that pouder one ounce and a halfe, Cerusæ, i. ℥. Tutie, i. ℥. Olei rosati one pint. Sepi vitulini, foure ounces. Succi plantaginis, Solatri, Lactuce, Centumnodij, ana, two ounces.

Boile all these iuyces with the oile and the suet on a soft fire, till the iuyce be consumed, then put thereto Vnguenti rosarum, one ounce, Ceræ albæ, one ounce. And boile them againe, euer stirring it with a splatter, then put thereto your Meneralls finelie poudered and searsed, and when it is sufficientlie boiled, take it from the fire, and when it is colde put it in a morter of Brasse & labour it well, then put it in a boxe, & thereof make your plaister on a linnen cloth.

Emplastrum Iacobi.

Rec. Lapidis calaminaris, Terræ sigillatæ, Lapidis Lazulæ, Lapidis sanguinaris, Lapidis Emiri, ana, two ounces. San-

guinis

guinis draconis, Boli armeni, ana, two ounces. Let all these be made in veris fine pouder, then take oyle of Roses, a pinte, and set it ouer a soft fire, putting thereto Cerę albæ, halfe a pound. Sepi cerniuę, foure ounces.

And when they be relented, put thereto all the pouders, and stirre them well, and let them boile a little while, then take it downe, and put thereto in fine pouder Mastiches, Olibani, ana, one ounce. And stirre it, and when it is almost colde, put therto Terebinthinę, two ounces. Camphorę, two dragmes. Made in fine pouder and well mingled, and make it vp in rolls according to art, and kępe it in Leather, and so vse it.

Emplastrum desiccatiuum, D. Butti militis & medici Regij.

Rec. Olei rosati, eight ounces. Cerusæ, Mindij, ana, two ounces. Lythargiri auri, Sanguinis draconis, Boli armeni, ana, one ounce, Camphorę, two dragmes.

Make all these Minerals in fine pouder, & mixe it with the Oyle, and set it on a soft fire, alwaies stirring it, and let them boile till they be plaister like, & so make it vp in rolls. And if you adde vnto this plaister in the boiling therof iiii. ounces of vineger of roses, it will be much better to drie, & defend the members from accidents. This Plaister was well proued by King Henrie the eight, for his legges.

Emplastrum Gul. Firmigonis militis.

Rec. Lithargiri pulueriſatę, j. pound. Olei rosati, one pinte. Ceræ albe, two ounces. Myrrhæ, Olibani, ana, one ounce. Vini albi, Vrinæ, ana, halfe a pound. Aceti albi, a quarter of a pound. Solatri, Plantaginis, ana, m. ſe.

Put the hearbes into a morter with the vineger, and stampe them together, then wring out the iuyce, and put into the Vineger and Wine aforesayde. And thus you must make your Plaister. Melt your Oyle and Wax together in a faire Panne, and let it boyle. Then by little and little put in your Litharge, euer stirring it.

Afterwardes put in your iuyces by little and little, till you haue put in all. But be sure it be well stirred, for sitting to the bottome. Your panne must be of a good bignesse, or else when you put in your iuyces, it will boile ouer the panne. So let it boile, euer stirring it well till the iuyces be consumed. Then last of all put in your Myrrhe and Olibanum in fine pouder, and stirre it till it be colde, if it be too harde, make it softer with Oyle of Roses, if it bee too soft, boile it a little more according to art.

This is a speciall plaister for all kindes of vlcerations, as well of the legges, as of other partes of the bodie, for it hath vertue alteratiue, resoluatiue, and exicatiue. Prouided alwaies that the bodie be vniuersallie purged, as often as neede shall require.

Cerates.

Hydreleon Galeni.

REc. Lithargyri argenti, one pound. Aquæ limpidę, Olei puri, ana, two pound.

The Litarge is to be made in most fine pouder, and the other to be stirred in a morter of stone, then boile them on a soft and small fire of coales. The medicine is to bee made in the Sunne the daie beeing faire, that it may be the whiter, and the fire vanishing, you must still adde freshe coales, and boile these to the substaunce and thickneste of a Cerote.

It doth refrigerate, and therefore is the vse of it profitable in vlcers, for it suffereth not anie humour to flowe vnto them, & that which is alreadie come, it putteth to the partes adiacent. Therefore it healeth itchinges and malignant vlcers, &c.

Oxelæum Galeni.

Rec. Lithargiri argenti, one pound. Olei veteris, Aceti optimi, ana. ij. pound. Confice vt supra. Componitur etiam ex Olei et Aceti, ij. pound and ℈. vel ex singulorum, three pound, tunc enim nigrius est et valentius.

It doth dry Fistules which haue not callus indurated, and cureth them. And doth cõglutinate græne and blouddy wounds and such like. &c.

Oenelæum Galeni.

Rec. Lithargyri argenti, one pound. Olei clari, Vini albi optimi, ana two pound. Coque et confice vt superiora.

It doth exciccate and dry, therefore it is good against fluxes and reumatike passions, and it healeth græne woũds.

Dia pipereos Galeni.

Rec. Lithargyri argenti, Cerusæ, ana one poũd. Olei communis, two pound. Cerę vj. vnces. Terebinthinę, three vnces. Thuris, one vnce and a halfe. Aluminis, vj. dragmes. Piperis, iiij. dragmes. Fiat in hunc modum.

The Lytharge being made in fine pouder, is to be boyled with oyle, in the Sunne and so long it is to be boyled vntill it come to ỳ substance of an Emplaister and will not cleaue to your hands. Then put to it the Turpentine and ware. These being molten, you shall ad your Pepper, Frãkensence, and Alome, made in fine pouder. Last of all, put to your Ceruse also finely poudred. And allwayes in the boyling styre them, and boyle them so long vntil they come to the thicknesse of a cerote.

It healeth the vlcers and sores in olde men, and those that haue soft bodies. And further, cureth all vlcers which will not without difficultie come to a cicatrice.

Ceratum è Cerusæ.

Rec. Cerusę, one pound and a halfe. Olei Rosati, ij. pound. Ceræ candidę, iiij. vnces.

The war being molten, put to the Ceruse made in fine pouder and boyle it so long vntil it commeth to blacke coulour.

It cureth burnings, skaldings, erysipelas scabbes, and all hot vlcers. &c.

Ceratum è Betonica, Capensis.

Rec. Terebinthinę, Resinę pini, Ceræ flauę, Ana iiij. vnces.

Betonicæ pulueratæ,one vnce.Masticches,Thuris,ana halfe an vnce.Mumiæ,foure dragmes.Misce,Fiat malagma captis vulnera vtile.

It is right profitable in paines of the head, &c.

Ceratum Capitale,Carpensis.

Rec.Terebinthinę in vino maluatico,sepius lotę, Resinæ pini,Cerę albę,ana,three ounces.Mumię,℥.i.& halfe.

The Turpentine,Rosen,and ware being molten,put to the Mumie made in fine pouder. Boile them on the fire,& stirre them continuallie. Then put these in a cleane vessell in which is rose vineger made of Malmsey, foure pound. Let all these macerate xviiii.houres,then expresse & wring out the vineger with your handes,and kæpe in a vessell of glasse to thy vse,&c.

Ceratum è styrace,Magistrale.

Rec.Styracis liquidæ,foure ounces. Ceræ flauæ,two ounces. Thuris,Myrrhæ,ana,one ounce. Fiat ceratum secundum artem. It doth asswage and cease hard tumours of ỹ nerues and ioyntes,and other parts.

Ceratum Gratia Dei.

Rec. Galbani,Opopanacis,Aeruginis, Thuris,Aristolochiæ longę,Masticches,Myrrhę,ana,one ounce.Hammoniaci,ounce j.dragme,ij.Ceræ,eight ounces. Lithargiri,Olei communis,ana,xviii.ounces. Bdellij,two ounces. Lapidis calaminaris,Lapidis Hematitis,ana,one ounce. Olei absinthij,foure ounces. Terebinthinæ,sixe ounces. Fiat Ceratum.

It doth mollifie,mundifie,& conglutinate, & therefore is right excellent in Apostumes,tumors,and such like. It is profitable in filthie vlcers,& doth conglutinate woands,&c.

Dia Cadma Galeni.

Rec.Cadmie preparatæ,Chalcitidis vstæ,ana,xvj.dragmes. Cerę,lxxx.℥.Colophonię,lxiiij.℥.Olei myrtini,j.pound.

It is right excellent in vlcers which will not easilie come to a cicatrise,for it doth cicatrise all vlcers, &c.

Ceratum de Salice.

Rec.Misy,Aluminis rot.Chalcitides,Melantherij, Aeruginis,Aluminis sciśilis,Gallarum accerbarum,ana,six ounces.

Ceru-

Ceruſæ, Cerę, Reſinæ fricte, Picis brutiæ, Bituminis, Olei omphacini, Foliorum ſalicis tenerorum, ana, two pound.

Boile the leaues in ſtrong vineger, then dꝛie them, and melt them in fine pouder. Then melt that is to be molten, and in the coling adde your other parcelles made in fine pouder, and make a cerote accoꝛding to art, &c.

It doth heale vlcers malignant, and thoſe that will hardlie be cured. Alſo Eriſipelas, & many other effects, as fiſtules and other.

Barbarum paruum Galeni.

Rec. Picis nigrę, Cerę, Reſine pini, Picis Grecę, Bituminis, ana, one pound. Lithargyri, ten dragmes, Ceruſę, Aeruginis, ana, fiue dragmes. Opoponacis, iij. dragmes. Olei, ix. ℥.

Let thoſe things that are to be beaten, be put in a moꝛter with ſtrong vineger. The other muſt be molten on the fire, and all being mired together; boile them ſo long, vntill they cleaue to thy fingers. But if thou wilt haue it apter to ceaſe dolour and paine, adde to it of Succi hyoſcyami, Opij, ana, halfe a dragme.

It is good to be vſed in gręene and freſh wounds, and foꝛ the biting of mad dogs. Alſo foꝛ inflamations of the ioynts, and the gout, &c.

Barbarum magnum Galeni.

Rec. Picis, viii. pound. Cere, vii. pound, viii. ounces. Reſinæ pini, v. pound, foure ounces, Bituminis, foure pound. Olei, one pound, vi. ounces. Lithargyri, Ceruſe, Aeruginis, ana, iii. ouncis, Thuris, vi. ounces. Aluminis liquidi, i. ounce & a halfe, Aluminis ſciſsilis, foure ounce. Opoponacis, Squammę eris, Galbani, ana, xij. dragmes, Aloes, Opij, Myrrhę, ana. foure dragms. Succi mandragorę, vi. dragmes. Terebinthine, ii. pound. Aceti, fiue pound.

Make of theſe a cerote in ſuch ſoꝛt as is mentioned in the deſcription going beſoꝛe, &c.

It is of the like vertues with the other going beſoꝛe, but that where the other is vſed in ſmall wounds, this is applied to great wounds, &c.

Iſis ex Galeno.

Rec. Cerę, c. dragmes. Terebinthine, cc. ℥. Squamma eris, Aeriugi-

Aeruginis, Aristolochię, Thuris, Salis hammoniaci, Aeris vsti ana.viij.dragmes. Aluminis vsti,vj.dragmes.Myrrhæ,Aloes, Galbani,ana.xij.dragmes.Olei veteris.x.vnces.

Boyle them as before,& your hands being wet in strong Vineger,make of these rolles according as is the vse, and after put them in Vineger ten dayes.Then take them out, and reserue them to thy vse.

It is found good for the head. Also against olde and rebellious vlcers,and those that be bloudie.&c.

Ceratum viride Machęrionis ex Galeno.

Rec. Olei Rosati omphacini.vj.vnces. Aristolochię,Galbani,Opoponacis, Hammoniaci, Aeruginis, Myrrhæ,Iridis, Ana one vnce.Terebinthinæ.vij.vnces & a halfe.Ceræ tantundem.Fiat ceratum.

It serueth for all grēne wounds, it putteth away inflammations, and is vsed in vlcers of the eyes and eares. It doth ingender flesh on the bones that are bare,and without flesh, and doth conglutinate spedely.&c.

Dia dictamini Galeni.

Rec, Olei veteris, two pound and a halfe. Lithargyri,one pound and a halfe. Aeruginis,one vnce. Squammę æris, sixe dragmes.Colophonię.vj.vnces.ij.dragmes. Pollinis thuris,one vnce and a halfe. Hammoniaci,two vnces. Aeris vsti,j.vnce. Diphrygis,Gentianæ,Ana.vj.vnces.Propoleos,Aloes.Ana.j. vnce.Galbani,one vnce and a halfe.Aristolochiæ rot. Dictamini cretens.Ana.j.vnce.ij.dragmes.Ceræ.xxv.dragmes.Cōfice in hunc modum.

Boyle your Litharge and oyle so long together vntill that they are well boyled. Then put to your Erugo,and Squamma eris, let them a little boyle. Then take them from the fier, and adde to them Rosine and Ammoniacum dissolued in Vineger, then put to Ware and es Vstum. Then boyle them againe vntill it cleaue not to the hands.

It is good in grēne wounds, punctures of the Nerues, olde vlcers,and those that will hardly cicatrize,also for Apostumes,felons,and scirrhous.

It

It draweth out thinges fired, as arrow heads, dartes, thornes, &c. and is of great force against all venemous byting and stinging. &c.

Ceratum Oxycroceum Nicolai.

Rec. Croci, Picis nigræ, Picis græcæ, Ceræ, ana, iiij. vnces. Terebinthinæ, Galbani, Hammoniaci, Myrrhę, Thuris, Masticches, ana one vnce iij. dragmes.

The Galbanum and Hammoniacum dissolued in Vinager, must be boyled vntil the Vineger be consumed. Then adde the Pitch, Ware, Terebinthine, all molten, after the Mastike, Frankensence, and Myrrhe, made in fine pouder. Boyle these vntill they come to a conuenient thicknesse, then put in colde water, and depresse it out againe. After with oyle of Bayes your handes being annointed, worke this Cerote, and extend it out. Last of all, your Saffron being made in fine pouder, mixe them together, and make a Cerote as arte requireth.

It is vsed in fractured bones, and in the parts of the bodie, where as dolour and paine is.

It doth mollifie and make soft all hardnesse, and putteth it away quite. &c.

Ceratum ex pelle arietina Arnoldi de villa noua.

Rec. Lithargyri, Lapidis Liæmatitis, Sanguinis draconis, Boli armeni, Opij, Masticches, Hammoniaci, Mumiæ, Galbani, Thuris, Costi, Lumbricorum, ana halfe a dragme. Picis nigræ, Picis græcæ, Ceræ albæ, Ceræ rubæ, ana one dragme. Radicum maioris, consolidæ, minoris, Ana. iij. dragmes. Rosarum rubrarum, Myrrhæ, Aloes, ana. xviij graines. Succi hypocistidis, Gallarum immaturarum, Balaustiorum, Aristolochiærot. ana. vj. dragmes. Visci quercini, Terebinthinæ, ana two dragmes. Sanguinis hominis rufi. ix. vnces. Fit autem in hunc modum.

Boyle the Wethers skinne whole, with the haire and wolle on it in water, vntil it be brought into the substance of Glew, which thou shalt straine. Take of this strained

one

one pound put into a new vessell, in which the Viselto is resolued, then put in the Lumbaickes, after the Ware, Turpentine, and Mastike, these being molten, put to the Gums dissolued in vineger, and boile them to the thicknesse of a Cerote. Last of all adde the pouders, and mire them together, and make them in rolls, &c.

It is of great force & vertue in ruptures, and hath often bene tried, &c.

Ceratum D. Guli. Buttes Medici, ad vlcera antiqua & Phagedenica.

Rec. Olei rosati, Ceræ albæ, ana, one pound. Cerusæ, one pound and a halfe.

Set the oyle and ware together on a soft fire, and relent the ware with the oyle, then put in the Lead in fine pouder, euer stirring it well vntill it ware blacke. Then take it from the fire, and dip therein pæces of fine linnen cloth, and there is your searecloth.

Ceratum D. Gul. Buttes Medici, ad iuncturarum dolores.

Rec. Olei rosati, foure ounces. Aceti, two ounces. Lithargyri, Cerusæ, Cerę albæ, ana, one ounce. Scorie ferri preparatæ, sixe dragmes.

Set the oyle ouer the fire, and put thereto the vineger, & boile thē on a soft fire till the vineger be cleane consumed, then put in all the foresayd thinges finelie pondered & searced, euer stirring it till it be plaister like, then dip in your cloutes, and when they be colde stripe them with a flake stone, and make them smoth, and vse them.

Ceratum viride Iamarici.

Rec. Olei rosati, halfe a pound. Sepi bubulini, one pound. Celidonij, allaluay, otherwise called sorrell de boies, vel panus conkelle, Lybistici, Thymi, Saluiæ, ana, three ounces. Ceræ, Terebinthinæ, ana, two ounces. Virides eris, Aloes, ana, one ounce. Mastiches, Olibani, ana, halfe an ounce.

Stampe all your hearbes with your oyle and tallowe, &

let them ſtand by the ſpace of eight or nine daies, then boile them till you haue taken the ſtrength of the hearbs, and put thereto firſt your ware, & let it boile till the ware be molten, then take it from the fire, and adde thervnto all the reſt of your things in verie fine pouder, and laſt of all, when it is almoſt colde, put in your coales, continuallie ſtirring til it be cold. This ointment was made by the noble Chirurgion Iamaricus, and is of moſt excellent operation.

Trochiſce and Pouders.

Trochiſci Andronij ex Andromacho.

Rec. Florum mali punici, ten dragmes. Gallæ omphacitidis, viij. dragmes. Myrrhæ, Ariſtolochiæ, ana, foure dragmes. Calcanthi, Aluminis ſciſsilis, Myſi, ana, two dragmes. Formentur trochiſci cum Sepæ, q.ſ.

It is good in greene wounds, it healeth fiſtules, corrupted bones, and taketh awaie all ſuperfluous fleſh, and is approued in eating vlcers called Phagedenica.

Trochiſci Polyide ex Andromacho.

Rec. Florum mali punici, ten dragmes. Aluminis ſciſsilis, three dragmes. Thuris, Myrrhæ, ana, foure dragmes. Calcanthi, two dragmes. Fellis taurini, ſixe dragmes. Aloes, viij. ℥. Formitur paſtilli cum vini auſteri, q.ſ.

It hath the like vertues and properties with the Trochiſce before deſcribed.

Trochiſci Meſuę.

Rec. Aluminis ſciſsilis, Aloes, Myrrhæ, Calcanthi, ana, ſixe dragmes. Croci, Crocomagmatis. ana, iij. dragmes. Florum maluorum granatorum domeſticorum, foure dragmes. Formentur paſtilli cum vini odorati et mellis, ana, q.ſ.

This Trociſce hath many vertues, and ſerueth diuerſe vſes in Chirurgerie, it doth relaxe and maturate, &c.

Trochiſci

Trochisci de Minio erodentes, Ioannes de Vigo.

Rec. Medullę panis non cocti bene fermẽtati, iiij. dragmes. Sublimati electi, one dragme. Minij, halfe a dragme. Aquæ Rosarum, q.s.

It taketh away all superfluous and spongious flesh in vlcers, it mundifieth filthie vlcers, it mollifieth Callus, and doth meruailously heale and cure fistules. &c.

Trochisci D. Gul. Cuninghami Medici.

Rec. Balaustiorum, Aluminis scis. Sangui. Draconis, Mastiches, Mumię, Thuris, Myrrhę, ana one dragme and a halfe. Lithargyri auri, Cerusæ venetæ, ana one dragme. Centaurij minoris, Helenij, Aristolochiæ rot. ana halfe a dragme. Croci, two scruples. Boli armeni præparati omnium pondus.

Make all these in most fine pouder, and with plantaine water, and Aqua vite (in which is dissolued of good Triacle, two drammes) bring them in to Trochisse, according to arte.

This Trochisse made in pouder & tempered with plantaine water, and layed on spleageants, doth put away inflammations, ceaseth flures, cureth herpes both estiomenus and miliaris, also Erysipelas.

Further, in olde and maligne vlcers which will not cicatrize, it doth both mundifie them, incarnate and make a perfect cicatrize, it hath many other vertues, which the Chirurgion vsing it rightly, shall easely perceiue. &c.

Puluis.

Puluis contra scabiem communis.

Rec. Sulphuris flaui, Cumini, Baccarum lauri, Staphidis Agrię, ana one vnce.

Make hereof a pouder, and whē you will vse it against the scabbes mixe it with oyle of Roses.

Alius Nicolai efficatior.

Rec.

Rec. Lithargyri, Hellebori nigri, ana, i. ounce. Sulphuris, Nitri, Maioranæ, ana, two dragmes. Make these in fine pouder, and vse it as before, &c.

Puluis Cephalicus Lucij ex Galeno.

Rec. Iridis, foure dragmes. Aristolochiæ rot. Pollinis thuris, ana, two ℥. Corticis radicum panacis, iiii. ℥. Fiat puluis.

It healeth those painfull sores called Nomæ.

Alius Tryphonis.

Rec. Corticis picæ, Squamnę eris, Punicis combusti ana, vi. ℥. Thuris, Iridis, Aristolochię rot. Resinę pinastrę, ana, iiij. dragmes. Aloes, Myrrhæ, ana, two dragmes.

Make these in fine pouder. It is verie good to take away the scales of corrupted bones, &c.

Alius eiusdem ad omnium hęmorrhagiam.

Rec. Thuris, j. ounce. Aloes, halfe an ounce. Fiat puluis.

This pouder must be mired with the white of an egge, and the haires of an hare small cut, and applie it to the place whereas the flure of bloud is, &c.

Puluis incarnans, & sanguinem restringens, Ioannis de Vigo.

Rec. Aloes, Myrrhę, ana, i. dragme. Sarcocollæ, one dragm and a halfe. Thuris, Pollinis farinæ, ana, two dragmes. Sanguinis draconis, Terræ lemniæ, ana, two dragmes and a halfe. Tutię, Lithargyri, Tragacanthę, ana, j. dragme. Fiat puluis tenuis.

This pouder doth incarnate and reste the flure of bloud, and therefore the author gaue it the same name.

Puluis causticus sanguinem comprimens Galeni.

Rec. Chalcitides, c. scruples. Chalcanthi, l. scruples. Misyos torrefacti, xxv. ℥. Aeris vsti, xij. scruples & a halfe. Fiat puluis.

This pouder taketh awaie proude and spongeous flesh, it staieth the flure of bloud, and maketh an asher, for it is a potentiall cauterise, &c.

Precipitatus Ioannes de Vigo.

Rec. Salis nitri, one pound and a halfe. Vitrioli romani, Alumnis, aua, one pound.

Distill these by a Limbeck, and take of this water one pinte, of Argente viue one pound. Put these in a Glasse, still with his Receptorie well luted, Cum luto sapientiæ, and still it so long vntill the glasse ware redde. Put awaie the water and the Argente viue, that is combull (which the Alchimists call Precipitatæ) make in fine pouder vppon a marble stone, then mire him with his water againe, and distill him as before. Then breake the Glasse and take him out, and make him in fine pouder. After put him in some vessell of Brasse, and with a slice also of Brasse flurre it, bæing on a sharpe and greate fire, vntill it loke lyke redde Lead, &c.

Alius rubeus Brunsuicensis.

Rec. Matris perlarum combust, Pompholigos, Lithargyri, Boli armeni, Terræ sigillatę, Sanguinis draconis, Aeruginis æris, ana, one ounce. Caphuræ, one dragme. Make these in fine and subtil pouder. This is a right perfect exicatiue pouder, and will not suffer superfluous or ill flesh to growe in the wound.

Alius puluis rubeus eiusdem.

Rec. Sanguinis draconis, Olibani, Aloes hepaticæ, Sarcocollę, ana, one ounce. Irios, halfe an ounce. Fiat Puluis.

This pouder is vsed in staunching of bloud in wounds, and is also incarnatiue.

Puluis

Puluis Longobardorum.

Rec. Sanguinis draconis, Bolie armeni, Terræ ſigillatæ, ana, one ounce. Balauſtiorum, Acatie, Hypociſthidis, Nucum cupreſsi, ana, one ounce and a halfe. Mumię, Maſtiches, Thuris, ana, two dragmes. Sang. humani combuſti, one ounce. Pilorum Leporis combuſt, three ounces. Fiat puluis.

It is excellent in letting of the flure of bloud, and doth also conglutinate wounds, and ioyne their sides together, &c.

Puluis ad ſanguinem ſiſtendum.

Rec. Sanguinis draconis, one ounce and a halfe. Olibani, two ounces. Maſtiches, one ounce. Aloes hepaticę, vi. dragms. Sarcocollę, fiue dragmes. Iridis, Pulueris molaris, ana, ounce, &c.

Make all these in fine Pouder, and kęepe it in a Glasse. This Pouder doth restraine the blęding of wounds, if they be ſtitched according to the arte of Chyrurgerie, and layed vpon the wound with mired the white of an egge, & a little gręne Balme laied vpon lint, and so applied to the wound, it maketh the flesh to grow together in short time, and kęepeth the wound from putrefaction and paine, and such like accidentes, &c.

Puluis Lanfranci pro eodem.

Rec. Olibani, two ounces. Sanguinis draconis, Boli armoniaci, ana, one ounce and a halfe. Maſtiches, Pulueris maloris, ana, halfe an ounce. Aloes cocotrinæ, three dragmes.

Make all these in fine pouder according to art, and kęep them in a glasse, and mire it with the white of an egge and gręne balme when you will vse it, as is aforesaid.

Puluis restrictiuus.

Rec. Pulueris molaris, Farinæ Hordeacię, ana, ſixe ounces, Gummi dragaganti, Gummi arabici, Olibani, ana, two ounces. Mumię, Boli armeni, ana, one ounce.

Make all these in fine pouder according to arte. This pouder is good for broken bones of the legges, armes, or anie other place of the bodie, and when you doe minister it, it must bee mingled with the white of an egge, well beaten together, and it must be spread vpon a linnen cloth double. And when you haue reduced and put the bone that is broken into his right place againe (so that it stand euen and straight, as it did before) you may applie this medicine vpon it, or round about it, as the cause doth require, laying the member euen vpon a bord, or vpon some thing made for the same purpose. But you must be sure to defend the member with a good defensiue that no euill accidents come vnto it, and see that the member be veris wel splented, with good and conuenient splents, and take heede that you binde not the member too straight or fast, least you stop the course of the liuelie spirites, and so the man maye both lose his member and his life. This pouder may lie on to the seuenth daie or the tenth daie, if there come no euill accidents, and then refresh it againe as you did before, and if anie accidents come to the member, you must remoue it the sooner, and anoint it with warme oyle, as is aforesayd. This pouder is good also for wounds, for it stoppeth bleeding, and maketh the wound quicklie to consolidate if it be laied vpon the other two pouders aforesaid, or on either of them in manner of a plaister, when they are mingled with the greene balme, as is aforesaid in their places.

Cataplasma D. Gul. Buttes ad Phlegmones.

Take a fat peece of Veale or a Capon, and boile it in water and white wine, then straine it from the flesh and set the same licour ouer the fire againe, and put thereto Maluarum, m. two, Foliorum Violarum, Solatri, ana, m. one,

Boile

Boile them till they be soft and tender, and then take it from the fire, and powre awaie the licour, and stampe the hearbes fine in a morter, and put thereto Barlie meale as much as shall suffice to make it like a Cataplasme or Pultis according to art.

Cataplasma eiusdem ad dolorem sedendum.

Rec. Maluarum, Fol. Violarum, ana. m. ij. Florum Chamomillę, Foliorum rosarum, ana. m. j.

Boile all these in milke till they be soft and tender, then put them in a morter, and stampe them small, & put thereto Vnguenti rosarum, Vnguenti populij, ana. j. ℥. and a halfe, Vitella ouorum, numero. ij. Farinæ hordei, two ounces.

Incorporate all these together, and when you shall occupie it, spread it thicke on a cloth, and warme it against the fire, and if there be anie hard indurate mattier in the member, then put thereto the Muscilage of Marsh mallow roots and Seminis Pfylij, ana, halfe an ounce.

Cataplasma Diaphoreticum D. Gul. Cuninghami Medici.

Rec. Foliorum Sambuci, Saluię, Rutæ, Altheæ, Chamomilli, ana. m. ii.

Bruse and cut these small, and boile them in in the decoction of Linesæde and Fenegrœke, and when they haue boiled vntill they be tender and soft, adde to them Olei irini, Anethini, Castorij, ana, one ounce and a halfe.

Boile them againe together, and make a Cataplasme according to art.

This Cataplasme is good to resolue & mollifie all hardnesse of ioyntes, and grose and tumie humours which are impact in the same. Therefore it is profitable in passions of ỹ ioynts, Chiragra, Podagra, and Sciatica, and such like. Also it may right well be vsed in colde tumours infesting the musculous parts of the armes and legges.

Aliud Valentius eiudem.

Rec. Radicum & foliorum Ebuli, Altheę, ana. m. i. Foliorum Rutę, Sabinę, Pulegij, Sambuci, ana. m. ſe. Chamæmeli, Meliloti, ana. m. ii.

Bruſe theſe being cut and bruſed in one part of Malmſey, and thrée partes of oyle of Camomill, vntill they come to the ſubſtance of a Cataplaſme, &c.

This Cataplaſme is of like vertues with the other going before, ſauing that it is of greater force and ſtrength in the effects before remembred, &c.

Cataplaſma anodinum, noſtræ inuentionis.

Rec. Foliorum Iuſquiami, Violarum, ana. j. m. Boyle them in water vntill they be ſoft, then ſtamp them fine, & adde to them Panis puriſſ. one pound. Lactis, one pound. Olei roſati, three ounces. Vitella ouorum numero iij. Croci, one ſcruple.

Make hæreof a Cataplaſme according to arte. This Cataplaſme or Pultas is verie excellent in ceaſing of paines in the gout, of cholerike perſons, where great inflammation is, & in a ſenſible & tender bodie. For it doth both aſſwage paine and remoue ſwelling in ſhort time, if the bodie bæ well prepared before.

Cataplaſma Rogerij.

Rec. Farinæ fabarum, one pound. Furfuris ſubtiliter puluerisati, ii. m. Stercoris caprini, one pound. Chamomilli, Meliloti, Abſynthij, ana. m. ſe.

Stampe your hearbes fine, and boile them all together with ſufficient white Wine, and læ of Barbers. Boile it vntill it come to the forme of a Cataplaſme, and applie it ſo hot as the Patient may ſuffer it. This Cataplaſme is of great reſolution in windie mattiers of the ioyntes, for it doth reſolue and diſpearſe the winde and watrie mattier,

tier, and specially if you put to it a little Cummin in fine pouder. Some vse to put in more Wine and Lée, and no Beane meale nor braune, and so boile it with hearbes and other thinges, as is before sayde. Then straine it, and with the licour being hot, and spunges applied to the iuncture, and so roll it according to arte. I haue seene this doe verie well.

Aliud Cataplasma.

Rec. Foliorum Maluarum, Violarum, Mandragoræ, Iusquiami, ana. m. i. Radicis Altheæ, Seminis Lini, Fœnogræci, ana, two ounces. Florum Chamomeli, Meliloti, ana, one ounce.

Boile all your hearbes in Potage without Salt, then stampe them finelie and put to the rest of your thinges in pouder. Then boyle all together with the broth aforesayd. And make thereof a Cataplasme according to art.

This Cataplasme is verie good to cease inflammations and paine in mixt matter both of bloud and choler, if you adde to it Vnguentum Populeon, two ounces.

VVaters.

Aqua Balsami.

Rec. Terebinthinę, foure pound. Olibani, two ounces. Ligni Aloes, two dragmes. Masticches, Cariophillorum, Galange, Nucis muscatæ, Cinamomi, ana, one ounce and a halfe. Gummi elemi, sixe ounces. Aloes hepaticæ, Laudani, Castorij, Radicum consolidę minoris & maioris, ana, two ounces. Foliorum hyperici, Betonicę, Chamepitios, ana. m. s. Aquę vitę, iiii. times stilled, sixe pound.

Make all those things in Pouder that you can make in Pouder, and mixe them well with the rest. Then put them all into a bodie of Glasse with the Aqua vitæ, and let

them stand to the space of seauen daies close couered. Then set them to still with a soft fire according to art. First, you shall haue a clere water called water of Balme, which you may receiue a parte, and when the coulour of the water chaungeth some thing to yellowneſſe, than keepe that water a part, and put vnder another receiuer to take the next licour, which will be like to a yeolow water, then you may increase your fire by little and little, till you perceiue drops of oyle come forth, which oyle will be yeolow also, then you may remoue that receiuer, and put vnder another to take the balme, which will come after that oyle & water, which Balme will be more thicker and redder than the oyle, and it will come of it selfe without water. This Balme is verie precious, and is called artificiall Balme. Now the oyle that I spoke off before, that came with the yeolow water, is called the oyle of Balme, and it will swimme aboue the water, so that you maye diuide it from the water at your pleasure. And this oyle is moſt precious in Paralices and Spasmus, comming of cold matter, as I haue many times proued. The water of balme is verie precious, an olde Alchimiſt did distill it againe with raine water, so much of one as of the other, & called it the Ladie of all medicines, for it is of great vertue in resisting the plague, poison, and many other things, if it be taken with Ale Bere, or wine, fasting, the quantitie of sixtene or twentie drops, in one spoonefull of anie drinke aforesaid, but I haue vsed it for a remedie againſt the plague, after this manner: Take of the leaues of Rue, Wormwood, Scabious, Turpentine, Marigoldes, and Dragance, of each two ounces, and put them into one quart of the water so distilled, with raine water, the space of three daies, and in that time the water wil take all the vertue from the hearbes, so that it shall not haue the vertue of those hearbes, but all the vertue it had in it selfe before. And thus I vsed it to the great profit & sauegard of many. If I should write all the meruailous things that I haue done with this water, Oyle, and Balme, it were to be meruailed at, and yet moſt true. As concerning the vse and commodities of them, you shall finde in diuerse of my bookes

as cause do require.

Lac Virgineum.

Rec. Litarge of siluer in fine pouder, three ounces, of good white vineger, halfe a pinte, mixe them together, and distill them by a filture, or through a little bagge, or by a peece of cloth, take of the same water, mingle it with water of salt, made with one ounce of Salt poudered, and halfe a pound of raine water or Well water, and mingle these waters together, and it will be white like milke, and with this rub the corrupt place. Some addeth a little Ceruse with this Litharge which is good for all rednesse of the face.

Aqua corrodens.

Rec. of Sal alkali, or if ye cannot haue that, take Sal Armoniacke and vnslaked Lime, ana, one pound, and beate them to fine pouder, and put them in an earthen pot which hath holes in the bottome like to a Coliander, & presse them stronglie downe, so that the water may not swiftlie passe through, and powre vpon them so much water as wil couer it a finger height aboue the pouder, and so suffer it to drop or straine through, and put vnder it a receptacle to keepe the water, and when all the water is runne through, renue or take new Lime and new Salt, as is aforesayde, and let the foresayd water runne through the same, and keepe that water for your vse. This water is good in many operations, it will cauterise like an hot yron, and it is good in fistules, and to many other things, if ye adde to this of Mercurie sublimate in pouder one ounce, it will bee the better, and chiefly in Chameleontiasi, wher the bones be corrupted.

Aqua Mercurialis.

Rec. Mercurij sublimati, Salis armoniaci, ana, halfe a pound.

Grinde them verie fine vppon a moller stone both toge-

ther with out any other licour, and put them in a strong Glasse, that will abyde the fier. Then take a newe earthen pot, and put ashes into it, the thickneſſe of one finger. Then shut your Glasse in the pot, and fill vp the pot with ashes round about the Glasse, so that the Glasse may stand soft within the pot. Then put your pot with the Glasse so sette in it, into a Foꝛneyse, and make vnderneath it a fier, and close the mouth of the glasse with some linnen cloth, not to hard foꝛ bꝛeaking of the glasse, and sometime open it to giue vent. And you shal know when it is boyled enough, by putting in of a knife oꝛ some other instrument of Iron, and if it be boyled enough, it will cleaue to the knyfe, oꝛ instrument lyke to molten Pitch. Then take it from the fier, and let it stand vntill it be colde, then bꝛeake the glasse, & take the substance that you finde in the same glasse, and make it in fine pouder once againe vppon a moller stone. Then let it stand a day & a night in an earthen vessell put a bꝛead, very thinne, that it may take the ayꝛe, and become moyst, then put it in a bagge and hang it vp, that it may dꝛop into a vessell of glasse, and that water will be very cleare, and is called Aqua Mercurij. This water maketh Copper white, and all other mettalles, and is of a meruailous operation, it will cure a fistule if it be put to the bottome therof by art, foꝛ it taketh away the hard flesh which letteth the fistule to be made whole.

Aqua ad oris Vlcera.

℞. Hordei excoriatę, M.j. Foliorum Saluię, Violarum, ana M.j. Rorismarinę M.ſ. Mellis, iij. ſponefulls. Aluminis, two vnces.

Boyle all these together in one gallon of water till the better halfe be consumed, then straine it, and lette the sicke man continually wash his mouth with it warmed till he be whole, it is good foꝛ those that hath a soꝛe mouth which commeth by reason of applying the vnguent vlen in Chamæleontiasi, in which vnguent Argẽtum viuum is put, and the moꝛe the pacient spitteth and walheth the better it is.

Alia

Alia aqua pro eodem.

Rec. Rorismarinæ, Saluię, ana. M.iiij. Lupinorum, M.ii. Aluminis, foure vnces. Mellus, halfe a pound.

Boyle all these together in foure gallons of water, vntill the halfe be consumed: Then let it stande vntill it be colde, and straine it, and kéepe it in an earthen pot to your vse. This water serueth for the lyke purpose, that the other aforesaid serueth for, and is a great excicatiue. It healeth Cankers in the mouthes of children, and in olde folkes also, if it be mixed with Vnguentum Egiptiacum, more or lesse, according to the disease.

It is good also to wash cãkerous Vlcers, if you put therto a little Egiptiacum, aforesaid. For it preserueth the Vlcer from putrefaction, if other conuenient medicines be applyed therewithall.

It dryeth vp also olde sores being mixed as is aforesaid, if they be not déepe in the flesh, many other good properties it hath, which you shall finde by experience thereof.

Aqua ad mundificandum vulnera, nostræ inuentionis.

Rec. Agremoniæ, Hyperici, Centaurij, Absinthij, Scabiosę Crassulæ maioris, Radicis Symphiti, ana. j. M.

Stampe all these wel, and let them boyle with one gallon of water, and one pottell of white Wyne, and halfe a pound of Suger, vntill halfe of the lycour be consumed. Then straine it, and kéepe it to your vse.

This water must be conueyed into the déepe places of wounds or vlcers with a siring, made so warme as the pacient may suffer it. And if you will haue it of great mundification, adde thereto Mel Rosarum. And if you wil haue it of greater excication, and some thing to cole and put away inflammation, adde vnto it when you will occupie it, halfe so much plantain water, or nightshade water, wherin a little Alume is boyled.

This

This water is excellent in operation, for it cleanseth frō the deepe partes all corrupt and filthie humours, and causeth the other medicines that are applied to the sore places to take the better effect in their operation, you maye mingle also with this decoction Vnguentum Egyptiacum, or the pouder of Mercurie precipitate, according to your discription.

Prouided alwaies, that all other good inuentions required in the arte of Chirurgerie, be obserued and kept, chiefly the euacuation of the mattier that they growe of, or that maintaineth them, and also to keepe such diet, as is meet for the curing of that disease.

Potio ad vulnera conglutinanda, nostræ inuentionis.

Rec. Polipodij quercini, foure ounces. Crissulæ maioris, Pirolæ, Anaice, Pilosillę, Veronicæ, ana, two ounces. Soliſequij, Agrimoniæ, ana, one ounce.

Chop all these herbes small, and put them into a newe earthen pot, and put thereto one pottell of the best Malmsey that you can get, and one quart of water of Scabious, and seeth them in Balneo Marię, by the space of three houres together, and in anie wise let the pot be close couered, and pasted about with some dow & bran, that no breath go forth, and if the wound be in the head, put in a little Sage, Betonie, and Lauender spike, and if it be in the breast, & through the lungs, put in a little Lycorice, Hysope, and Enula campanie rote, if it be about the raines, put in a Parslie rote, and a Fenell rote, when all these thinges are boiled together, let it stand by the space of one night after, then open the pot and straine forth the licour, and put therevnto of fine Suger foure pound, & boile it a little againe. This drinke is most excellent for the curing of wounds that be in the bodie, or through the bodie, for it healeth them in short time, and consumeth awaie the bloud that is within the bodie without anie griefe or paine, in a manner they neede no other remedie. For if they wash the wound with this same

drinke

drynke a little warmed, & lay a wet cloth vpon the wound foure or fiue double, wet in the same drincke, it will heale it in very short time without any other medicine, drinking euery morning and euening foure vnces at either tyme of this same drinke warmed.

This drinck hath bene well proued in the warres both by sea & land, by me Thomas Gale Maister in Chirurgerie in the Citie of London. Prouided alwayes, that the patiēt be kept soluble, and vse a very smal dyet, vntil the seuenth day be past, and so to be well gouerned in all other things appertaining to his health, according to the art of Chirurgerie.

Alia potia pro eodem nostræ inuentionis.

Rec. Hordei excorticati, Agremonie, Hissopi, Bethonicæ, Polipodij, Symphiti, ana M.ſ. Plantaginis, Centumnodiorum ana M.j.

If you may not haue these herbes grene, take them dry, you must put in also, Hyperici, Scabiose, q.ſ.

Boyle all these herbes together with your Barley, in thræ pottells of water, with foure sponefulls of Honey, till the better halfe be consumed, then let it stand till it be cold and straine it. This drink must be vsed morning and euening warme, at eche time fire vnces, with this he did mer-uailous cures, and healed them in short time, for this drink defendeth the wound from euill accidentes, if the patient kæpe good diet, and other things necessarie for his health, as is sayde before.

Aqua decoctionis ligni Sancti nostrę inuentionis pro de Morbo Galico, per Thomas Gallus, Chirurgus Londonienſis.

It is to be considered that there be thræ sortes of this wode, that is to say, that that is very olde, that ỹ is meane and not olde, and that which is young and the bowes of the træs, & euery one of these doth differ in qualitie from other, for that that is young with the braunches also, are of more moyst and airie substaunce, then the other two be, and that

that

that is olde is more harder of digestion & slower in his operation, and longer or any cure may be done with it, wherefore we doe commenly vse that which is young and whitest, with the barke of the same, for it doth not drye away the natural moisture of mans body, so sone as the olde doth, and that is by reason of his moystnesse, yet in his propertie he doth as much as the other, the olde & blacke wood is good to make oyles, and such lyke things, either by decoctions, or by distillations, for it is more fat and Gummi then the other is, except it be rotten, & that is not good in medicines.

This wood hath a singuler propertie against Chamæleontiasin, and also against manie other moist and rumaticke sickenesse, for it letteth putrifaction, and altereth the euill qualities of the humours, it comforteth the stomacke, and openeth the obstructions of the liuer, and moueth the bodie to sweate, and helpeth nature to put forth manie perillous and contagious vapours by the powers outwardly.

Also that which is the oldest, being boyled in decoctions and other wayes, by art prepared, is verie good for vlcerations, fistules, ache or paine, being applied according to the arte of Chirurgerie, as is mencioned in this booke in diuers places.

And first of all to make the decoction to drinke inwardlie, you shall vse the youngest woode or the braunches with some part of the barke of the same, as it followeth here.

Take one gallon of faire water, and put into a newe earthen potte, the which may holde three gallons of water, or two gallons and a halfe at the least, and put thereunto of the youngest woode aforesaide, with some of the barke, one pound in pouder, Licorice brused, two ounces. Set them vppon a fewe coales, the pot being close couered till it be verie hot, then take it of the fire and let it steepe twelue houres. Then boyle it vppon a soft fire, the pot being close couered, that so little of the ayre may passe away as is possible, till the halfe be consumed, then straine it and put it into a faire vessell.

This is the strong drinke which they may drinke off, morning and euening, at eache tyme eight ounces, and eue-

ries

rie morning the ſicke perſon to ſweate after that he hath taken of the ſame drinke, by the ſpace of two houres.
And for the ſecond Decoction, which he muſt vſe with his meate, you muſt put to the ſame wood that you ſtraine from your firſt decoction ſo much water as you did before, and let it ſtande and ſteepe as is aforeſaide, in the ſame potte, by the ſpace of twelue houres, and then boile it till the halfe be conſumed, as ye did the other before.

In weake bodies and colde, we haue vſed to put in the firſt Decoction one pinte of Malmeſie or Sacke, a little before that it be taken from the fier, and in the latter drinke we haue vſed to put in rackt Reniſh wyne.
But in the ſtronger bodies and thoſe that be not ſo weake, we vſe to giue it alone without wyne.

The bodies muſt be well prepared before they take this Drinke, or enter into the rules of this diet, by the ſpace of twelue or fouretene daies, in the which thoſe humours may be purged, that doe hurte the bodie or mainteine the diſeaſe, and then when the bodie is well purged, they may enter into the ſame diet, geuing them no other drinke, but of this ſame aboueſayde, and deminiſhinge theyr meate by little and little, vntill the ſixte daye be paſt, then lette them haue ſo lyttle meate as they maye lyue with all, for if they ſhoulde take muche meate, nature ſhoulde be ſo occupyed aboute the diſgeſtion of the ſame, that it ſhould not be able to ouercome and digeſt the ſickneſſe: either elſe, ſuch quantitie of humours might growe thereof, that might ſtill prolong and mayntaine the dyſeaſe.

Yet neuertheleſſe, thoſe that bée Cholericke bodyes, maye take more meate and moyſter meates, then thoſe which be Phlegmaticke and moyſt bodies.

Generally, theyr meates muſt be roſted, and of good nouriſhment, and eaſie to dygeſt, as Mutton, Veale, Capons, Rabbettes, Chickens, Feſants, Partridges, Blacke Byrdes, Thruſſhes, and other ſmall byrdes of the Wood.

This

This must be onely their meate, and rosted without salte, except in cholericke bodies that be lyke to fall into some feuer, they may haue their meates boyled, & eate them with a little Verjuse.

In Phlegmaticke bodies they may forbeare their supper, and hold them content with one meale a day, except at night a few Resons and blaunched Almonds.

But Cholericke bodies must haue some meate at night to satisfie their stomacke withall, because they will soner digest it, and hath no such quantitie of moist humours, as the Phlegmaticke or Sanguine person hath. Their bread must be onely Biskit, made with a fewe Anyseedes & Sugger, without Salt. They may take of this bread more or lesse, according to the strength of their stomackes and complexion, as is aforesaide.

This dyet or order must be kept by the space of xl. or l. dayes, more or lesse, according to the necessitie of the sicknes, & euery sixt day the bodie must be purged with some gentle medicine, meete for the disease, and for the complexion of the man. That day ỹ they take their purgation, they may not drink their drink, nor sweate in the morning, nor no tyme that daye, all other dayes they must sweate, for in sweating is the chiefest matter, that is required in the maner of cure. They must vse all other maner of necessarie things, as sleeping, quietnesse, good companie, and conuenient place, and aboue all things to be kept close in all tyme of their cure, least that the ayre might enter in, and stoppe the powers and let them to sweate, and doe them other displeasures.

This meanes of curing is most praised of many of our latter writers, and chisely of one Hutton a Germaine, of Nicolas Massa, Ioannes Baptista Montanius, Anthonius Gallus, Alfontius Farariencis, Anthonius Musa, Muchellus Belogenis, Leonardus Fuchsious, Ioannes Tægaletius, Dominicus Leonius Luencis, and of many other more, which were very long to rehearse, they haue written all in the commendation of this wood, but in effect, they haue cõcluded in the vsing of it, as I haue made mencion here aboue. And I my selfe

hath

hath found great profit and gotten great worship thereby, I inuented my selfe a sirupe, which I made with this same decoction, stronglie boiled with Suger, so much in weight of one as of the other, boiled till it come to a sirupe, with the which sirup I did manie great cures, and chiefly when the patient was verie weake, as you shall finde more hereafter in my bookes. And thus we end this Chapter, for the which the name of God bee praised.

Potio ad vulnera recentia Brunswicensis.

TAke Iuie leaues, or Edera arborea, growing on an oken tree, foure ounces, Winter greene, small and greate, or Pirola, in Latine, Sanicle or Diapensia, Syndan, Herba fortis, or Veronica, ana, ii. ounces, Herba solequij, one ounce. Chop all these together verie small, and put them in a peuter pot, and put thereto foure pound and a halfe of the best wine, and of water one pound and a halfe. And ye shall seeth them in Balneo Mariæ three houres long, without taking off the Lyd of the pot, then on the morrowe after put thereto eight ounces of Suger. If the wound be in the head, then put thereto Betonie, two ounces, Sage, one ounce, Lauender, halfe an ounce. And if the wound be in the breast, then put thereto, Licorice, two ounces, Polipody, one ounce, Isope, halfe an ounce, and if the patient be feeble and sore, then put thereto Buglosse flowers, Borage flowers, ana, i. ounce Roses, halfe an ounce, then if the patient haue great heate, put thereto violets, two ounces, flowers of Nenufar, halfe an ounce. If the wound be on the left side, do thereto liuerwort, one ounce, Patrisilue, halfe an ounce. Also if he be not soluble, then it is needfull to put thereto of Sene leaues, Cassiæ fistulæ, ana, two ounces, and if he be deepe wounded, then put thereto Celidonie rootes, foure ounces, and giue it him to drinke at morning, at noone, and at euening, and at euerie time, foure ounces.

Alia potio eiusdem, pro eodem affectu.

R. Matrifiluę, Pilosillæ, Nausturtij, Brunellę, Plantaginis, ana. m. i. Rutę, Matricarię, Chelidonię. ana. m. i. Herbę saracenicæ. m. i. se. Diarentię, Herbę tunici, ana. m. i. Saluię, m. se. Serpentinæ, Dictami. ana. two ounces; Castorij, Mumiæ, Myrrhæ, Absinthij, ana. halfe an ounce.

Put all these together in a pot with good white Wine, and couer the pot with a lid, and close the lid with dough, and in the lid make a small hole, and stoppe it with a tap of woode, and let it seeth till the third parte be consumed, and drawe the tap sometime out, that ye may smell when it is inough. Of this giue the patient to drinke at morning and euening a spoonfull, and though the Patient be meetlie in health, yet shall he not drinke the lesse, for he shall in his daylie drinke, meddle three or foure drops of the same.

Aqua imperialis contra pestem.

Rec. Radicis Brioniæ, Gladiolæ, Angelicæ, Turmentillæ, Lapatij, Draguntij maioris & minoris, ana, two ounces, Corticis fraxini, Guaiaci, ana, one ounce.

Gather your rootes in March, and picke them cleane, then stampe them with the barkes aforesaide, and put them in strong Malmsey, the quantitie of foure pound, or a pottell in a close pot. So let them stand infused vntill the later end of May, then gather these hearbes following.

Foliorum scabiosę, Betonicæ, Minthę, Verbenę, Turmentillæ, Calendulę, Pimpenillę, Rutę, ana. m. ii. Foliorum Angelicæ, Dragantiæ, Absinthij, Saluiæ, ana. m. iiii. Hyperici, Pioniæ, Valerianę, Endiuiæ, ana. m. i.

Bruse all your hearbes, and put them infused in one quart of strong vineger, one quart of Rose water, and one quart

quart of good white Wine, three daies. Then still them in a common still, and kéepe this water to your vse, for it is most precious against the pestilence béeing mixed with good Petridatum or Triacle, and giue fiue spoonfulls euerie day both to the sicke and whole.

Aqua corrodens alia.

R. Salis gemmæ, Salis alcali, ana, three ounces. Aluminis scistilis, vi. ounces.

Make these in fine pouder, and put them in a Gallon of Smiths water, and boile them on the fire, and reserue this to thy vse. This is verie good against filthie and rotten vlcers, hauing inflamation ioyned with them, as experience both hath and can testifie.

Aqua nobilis in oculorum vitijs.

Rec. Fæniculi, Rute, Betonicæ, Chelidoniæ, Verbenæ, Euphragiæ, ana. ii. m. Rosarum rubearum, xii, M. Ligni sancti, lib. ſl.

Bruse these, and put them in a new earthen pot with a quart of white wine. Let these be thus infused two daies, after put to them Aluminis, iii. ounces, Salis gemme, ℥. ii. Masticches, Vitrioli, ana. ℥. i. Olibani, Myrrhę, ana, one ounce, ſl. Make these in pouder, and put them with the other parcells into a still of glasse, and put his head on it, and lute them well together, and set a ruptorie also to it, well closed to the spout of the head, so let them stand one daie, after distill them in Balneo Marię, according as arte requireth.

This water remoueth the white spots in the eies, and restraineth the flure of humours which haue recourse to the eies, and is right excellent in other griefes of the same, as hath bene certainlie tried not long since, in a childe of the Worshipfull Maister Gunstones of London, which hauing sore eyes, and diuerse sundrie medicines to them applyed, dyd nothing preuaile, but brought the eies into worse

case: insomuch that some learned in Phisicke counsailed the parents to boare the skin of the necke through with an hot yron, that the humours ascending might breath out, or else to purge the head with pils, & at the least to make diversion of humours. But in fine, nothing preuailed, & so the child was left to the worke of nature. Then M. Gunstone seeing her childe voide of helpe & comfort, was yet not in dispaire, but hoped that God would send some remedie. So she found an olde booke, in which this water aboue said was contained, & for the perfecter distilling thereof she did require my helpe, which willinglie I graunted, and distilled the water, of which three or foure times she did drop a little into the childes eies, by which vse and continuance the inflammation was put awaie, the flure of humours staied, the white spots and webs consumed, and the childs eies restored (thanked be God) to their perfect health and sight. Which water for the excellencie and noble vertues, I thought good to set out for the comfort of such as shall haue the like infirmitie. I haue with this water done many good cures since ỹ time, and haue of my selfe added vnto it more than was in sir William Firminghams booke, who was well learned in Chirurgerie, and author of this water, the roses, and Lignum sanctum. He flourished in the yere of grace, 1475.

Alia aqua pręcioſa in ijſdem oculorum morbis.

Rec. Fœniculi, Verbenę, Saluię, Agrimonię, Betonicæ, Rutæ, Chelidoniæ, Eufragiæ, Calaminthę, Pimpinellæ, Scabioſę, Chamędryos. Bruse your hearbs, & put to them one quart of white wine, and a pint of water of red roses, also adde Aluminis, foure ounces. Tutię, two ounces. Caphurę, iiij. dragmes. Make these in pouder, and distill them in a common still, and when you haue once distilled them, put the water vpon the feces, and distill it againe, and then reserue it to thy vse. This water is right precious in rumatike bodies & inflammations of the eies, and other like effects.

Aqua

Aqua sine pari.

Rec. Aqua vitæ quinquies distiliatę,iiii.li. Salis vsti, Sulphuris viui,ana.i,pound. Tartari albi,iii. ounces. Nucum Inglandis, Auellanæ, ana,foure ounces. Nitri,two ounces. Mirrhæ, Aloes,ana,one ounce. Gariophillorum,Nucis muscate,ana,one ounce,ſl. Corticum limonum,arangię,ana.vi. ounces. Betonicę,Verbenæ.Agrimoniæ,Hyperici,Fœniculi,Valerianæ,Scabioſe. ana.i.m.Rutæ,Abſinthij, Menthę,ana.m.i. Radicum angelicę,Zedoarie,Tormentillæ,Acori, ana.i.ounce & a halfe. Florum geneſtæ, foure ounces. Roriſmarini, Camomillæ,ana,two ounces. Theriaces optimæ,℥.iii..Sem. Aniſi, Peonię,Petroſelini,ana.℥.i.℔.Bruſe thoſe ý are to be bruſed, and put all together,and let them ſtand fyre daies, after diſtill them according to art,and if that you doe againe diſtill them on the feces once or twice,you ſhal make the water of much more effect and vertue.

It is excellent againſt venime,poiſon, and peſtilence, it doth kępe the humours and bodie from corruption and putrefaction, and that experience can right well teſtifie. The proportion or quantitie,is to giue one ſpoonful with a cake or two of Manus Chriſti,or in cholerike and ſanguine complections,and hot regions,times of the yeare, with ſirupes of Bugloſſe or Violets,&c.

Thus endeth the Antidotarie,compiled and publiſhed by Thomas Gale, Maiſter in Chirurgerie. 1563.

FINIS.

A profitable Table, containing all the differences

Place this Table in folio. 12.

y tumor
ians body
ther

1. According to Nature.
2. Aboue Nature.
3. Against Nature of which there are iii. kinds, that is to say

1. Humoralis comming of humours, of which there are ii. kindes

Simple, ther are ii. kindes,
- Hot ther are ii. in number.
  - Phlegmone
  - Erisipelas.
- Cold ii. in number.
  - Oedema.
  - Scirrhus.

Compounds springing of many humors mixed either
- Equallie.
  - all iiii. humors & the tumour taketh name of them all.
  - ii. together as
- Inequallie, as when there is mixed with

2. Flatuosus which commeth of the windie spirits, & are ii.
- Timpanites.
- Priapisinus.

3. Varius called because it is somtime of humors, somtime of spirits, and somtime of both: such are

Vitiligo; Exāthemata, Parotides, Mētagra, Epiplocele, Enterocele, Enteroepiplocele, Bubonocele, Exomphalos, Arthritis, Podagra, Chiragra, &c.

Vnto these are referred certaine other tumours, as

- Vnto Phlegmone: Phygethlon, Bubo, Phyma, Dothienes, Anthrax, Gargareon, Paristimia, Aneurisma, Gangrena, Sphacelus.
- Vnto Erisipelas: Herpes, Esthiomenus, & Miliaris, Phlyctænæ, Epinyctides, Hydroa, &c.
- Vnto Oedema: Atheroma, Steatoma, Meliceris, Hydrocele, Ascites, Leucophlegmatia, Chæras, Broncocele, Hydrocephalon, &c.
- Vnto Scirrhus: Cancer, Elephantiasis, Satyriasmus, Psora, Lepra, Enchimonia, Melasma, Varices, Sarcocele, Polipus, Verrucæ, Acrochordones, Myrmeciæ, &c.

Bloud &	Coller,	and is cal- led	Phlegmone & Erysipelas.
	Fleme,		Phlegmone & Oedema.
	Melanc,		Phlegmone & Scirrhus.
Coller &	Bloud,	and is cal- led	Erisipelas & Phlegmone.
	Fleame,		Erisipelas & Oedema.
	Melãch.		Erisipelas and Scirrhus.
Fleme &	Bloud,	and is cal- led	Oedema and Phlegmone.
	Coller.		Oedema and Erisipelas.
	Melãch.		Oedema and Scirrhus.
Melancholie &	Bloud,	and is cal- led	Scirrhus and Phlegmone.
	Coller,		Scirrhus and Erisipelas.
	Fleame,		Scirrhus and Oedema.
Bloud,	Coller,	and is cal- led	Phlegmone Erisipelatodes
	Fleme,		Phlegmone Oedematodes
	Melãch,		Phlegmone Sirrhodes.
Coller,	Bloud,	and is cal- led	Erisipelas Phlegmonosum
	Fleame,		Erisipelas Oedematosum,
	Melãch,		Erisipelas Scirrhosum.
Fleame,	Bloud,	and is cal- led	Oedema Phlegmonides,
	Coller,		Oedema Erisipelatodes.
	Melanc,		Oedema Scirrhodes.
Melancholie,	Bloud,	and is cal- led	Scirrhus Phlegmonosus.
	Coller,		Scirrhus Erisipelatosus.
	Fleame,		Scirrhus Oedematosus.

These Tumours take their names first of the humour which swimmeth in the mixture, and next of that which is with it mixed.

AN EXCELLENT TABLE, DECLARING, the differences of wounds.

Place this Table in folio. 22.

The principal differēce of woundes are taken of iii. thinges: that is to say

1. Of the nature of the part in which thewoūd is made: as in

- Similer part, of which there are iij. differences, for it is either in
  - 1. Soft part, as in: Flesh. Fatnesse
  - 2. Hard part as in: Bones. Ioynts
  - 3. Neither soft nor hard, as in: *Veines. Arteries, Nerues Tendons ligaments.*
- Instrumētal part: so is it either in the
  - 1. Principall part: as in the: Hart. Liuer. Brayne.
  - 2. Seruing the prīcipal parts, as in: *Aspera arteria, Throte. Bladder.*
  - 3. not seruīg the principall parts: *Nose. Eye. Hand. Foote. &c.*

2. of the essēce of solution of continuitie.

- Simple wound.
- Cōpound.

3. Of the differēce of solution of cōtinuitie: as of

- Quantitie & the woūd is called: *a great or litle, a long or short, a broade or narrow, a deepe or shalow* — Wound.
- Figure, as: *equall or inequall. a crooked or oblique. a retorte.* — Wound, &c.

Euery vlcer is either

- simple, and the names with differēce of these, springeth .v. sundry wayes, that is to saye, of
  - 1. Humours so be there foure. Choler, Flegme, Melancholie. — and are called of them — Cholerike, Flegmaticke, Melancholike — Vlcers.
  - 2. Sanies & the vlcers called hereof by .iiii. names, for of Sanies, Pus, Sordicies, Virulentia. — the vlcer is named — a Sanious, a purulent, a filthie, a virulent — Vlcer.
  - 3. Accidents or symptomata, as of Corrosion, Putrifaction, Dolour. — the vlcer is called — 1. a corrodīg or phagędenical, 2 vlcus putridū, 3 vlcus dolorosū — Vlcer
  - 4. Of sickenesse as of Intēperatnesse, Inflāmation, Erisipelas, Cancer, Fistula. — & taketh to name — Dyscratum, Phlegmonosū, Erisipelatosū, Cancrosum, Fistulosum — Vlcus
  - 5. Similitude as of Formica, Cauerna — it is called — formicosum vlcus, Cauernosum vlcus. — & hath diuers names according to the part it is in, as in the — 1. Flesh, 2. Veines, 3. Arterie, 4. Nerues, 5 cartelage, 6. Bones — called — caruosa, venosa, arterosa, neruosa, cartilaginea, ossea. (sa

This Table is to be placed in fol. 23

A Table containing the differences of fractured bones.

Place this Table in folio. 25.

Euerie fracture of the bone is either

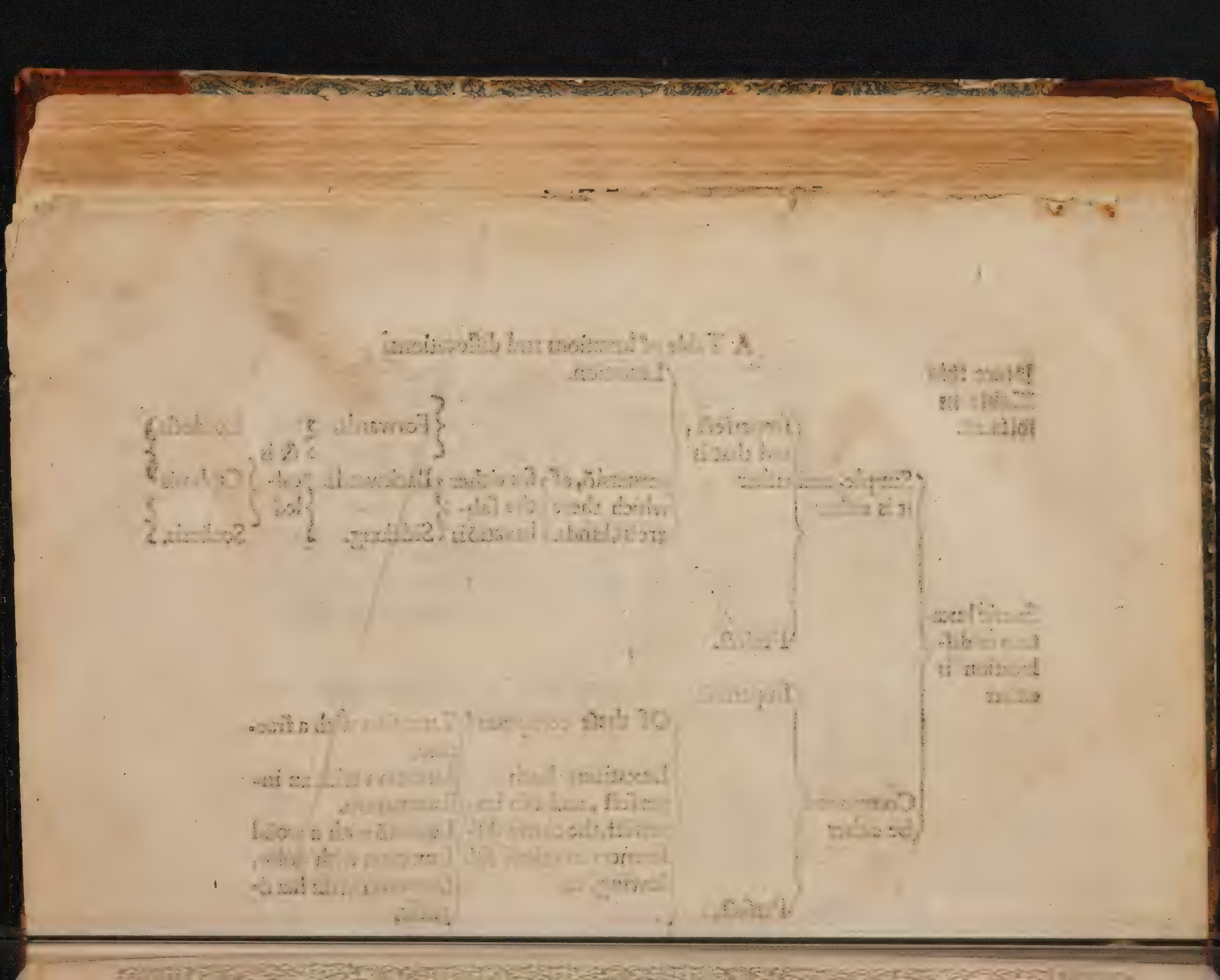
- Simple fracture of the bone, of which there are iii. kinds, that is,
  - 1. ouerwarts, and they are three, that is,
    - 1. Cauledon, when as the bones are broken like Stalkes of hearbes
    - 2. Raphanidō when as the bones are broken like Radish.
    - 3. Sicyedon, when as the bones are broken like Cucumbers.
  - 2. Rifts or fissures called Schidacidon.
  - 3. broken in many small peeces, named Alphitidon.
- Compound and ioyned with it both.
  - Sicknes as a fracture with
    - a Wound.
    - Gangrena.
    - inflāmation
    - Erysipelas.
    - intēperatnes
    - &c.
  - Accidēt as a fracture with
    - Itching.
    - dolour, &c.

Albucasis nameth other differences of Fractures: as a fracture of the iawes, a fracture of the nose, a fracture in Cranio, a fracture of the spine of the backe, a fracture of the fossiles, &c. Which be no true differences of fractures, but rather noteth the part affected.

A Table of luxations and dislocations.

Place this Table in folio. 26.

- Euerie luxation or dislocation is either
  - Simple, and it is either
    - Imperfect, and that is either
      - Luxation.
        - peruersiõ, of which there are iii, kinds.
          - for either the subluxatiõ is
            - Forwards. & is called
              - Lordosis
              - Ciphosis
            - Backwards. & is called
              - Ciphosis
              - Lordosis
            - Sidelong. & is called
              - Scoliosis.
    - Perfect.
  - Compound be either
    - Imperfect.
      - Luxations both perfect, and also imperfect, the chiefe differences are these following, as
        - Of these compound
          - Luxation with a fracture.
          - Luxation with an inflammation.
          - Luxatiõ with a woũd
          - Luxation with dolor.
          - Luxation with hardnesse.
    - Perfect.



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